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EDITED BY JULIUS F. MINER, M. D.

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AND

EDWARD N. BRUSH, M. D.

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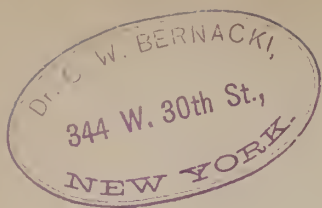
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Original Communications.

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ART. I.—*The Influence of various Occupations upon the Eye.* By LUCIEN HOWE, M. D. Read before the Buffalo Medical Association, July 6th, 1875.

In the relation in which it is proposed to consider these different employments, they may be divided into four classes, according as they subject the eye to danger arising,

1. From injuries from foreign bodies.
2. From irritation of the conjunctiva.
3. From overtaxing the power of accommodation, and
4. From weakening the nervous sensibility.

Concerning each of these divisions, mention will be made of the persons included in them, the form of disease resulting, and the general indications for its treatment. Let us begin then with those individuals who are liable to injuries from foreign bodies. Of course, these accidents can happen to any one, but of those particularly exposed, there should be specified before all others that class of artisans who have to do with the manufacture or use of steel instruments.

In the process of forging them there is a shower of sparks driven from beneath the hammer, which carry destruction to any part of the eye they happen to touch. To every blacksmith these would

be a source of constant danger, but for the fact that as he strikes the heated mass, they fly off at the side instead of in the direction of his face. When the instruments are to be burnished or sharpened on an emery wheel or grindstone, there is another risk to be run from the bits of stone and metal which then come off in the direction of the workmans eyes. Again, in the use of the chisel in cutting iron or copper, and by marble workers, and stone cutters in general, there is danger, not from the fragments driven off in front, but from those which rebound from beneath the point and which are often called "back chips." The number of accidents thus occurring is realized only by those whose attention, as specialists, is directed to the subject. An eminent German observer, has collected statistics which show that almost one-half of the workers in metal, suffer from such injuries.* In order to disprove or verify this statement, I have collected some figures bearing on the subject, and in general find the conclusion quite correct. Without going into detail it is necessary only to say that four of the largest establishments in this city were visited where various kinds of "edged tools" were manufactured, and where, of course, emery wheels and grindstones were used extensively. Among the blacksmiths, injuries to the eye were not found particularly frequent, but when they did occur were of a serious nature. Of the men engaged in sharpening or burnishing the instruments however, all, had suffered to a greater or less extent from the flying sparks of metal or bits of stone. In most instances these have been readily removed by some fellow workman, while a few were given over to the surgeon. For example, of 23 men so employed, during one year, each one was, on the average obliged to loose a day's work in every two months, two had been disabled for a longer time than a week, and one had lost an eye entirely. Next to this class of artizans, the persons most liable to similar accidents, are sportsmen. They arise sometimes from the premature explosion of gunpowder, but usually they come from the bursting of the percussion cap, fragments of which almost invariably enter the right eye, that one being nearer the hammer and open, while the other is closed in the act of aiming. In military practice however, such accidents

* Comp. Stellwag on the Eye, p. 16.

are rare, for the reason that the caps are better in quality and make than are those sold in the shops for ordinary or inferior guns.* Besides the individuals thus mentioned, of course any one is liable to accidents where bits of glass, wood, coal or other substance strike the eye with such force as to rupture its coverings and find lodgment within. These, and all other materials may be divided clinically into the two classes, of those which are, and which are not readily oxidizable. This distinction is a practical one for the reason that those of the former kind, such as fragments of iron, copper, wood and the like, must be removed from the eye immediately, and at all hazards, while it often seems so patient under irritation produced by minute particles of glass, charcoal, gunpowder, or even lead, that active measures are ill-advised. In all cases of course the wound must be closely watched, but in those where it heals externally, and symptoms of irritation subside, it is safe to conclude that either the foreign body is not in a position to do any immediate harm, or is not lodged in the eye at all. In instances where it is thus present, it becomes encapsuled and may remain for years without doing further injury.† For instance, the writer has notes of a case observed at the General Hospital in Vienna, where a small shot had penetrated to the center of the vitreous and could be seen there, covered with an apparent exudation, and having various attachments. In regard to the prophylactic treatment of the individuals mentioned as particularly exposed to the accidents under consideration, several methods have been proposed. The only practical one is the use of spectacles made of thin plates of mica.‡ This has the advantage over glass of being lighter, cheaper, and not so easily broken. Possibly, if they were better known to the workingmen of this country they would be more generally worn, but so far, even the safety afforded by ordinary glasses, is for the most part, disregarded.

To the second class of occupations which we shall consider, belong those persons who are habitually in an atmosphere which acts mechanically or chemically as an irritant to the conjunctiva. This excitation is produced by particles of matter finely disintegrated;

* Lawson, *Diseases and Injuries of the Eye*, p. 330.

† Max Tetzner, *Compendium der Augenheilkunde*, s. 312.

‡ Dr. Colin, *Berliner Klinische Wochenschrift*, Feb. 24, 1868.

it may be, as a mixture of various substances called collectively "dust;" it may be of carbon under the form of smoke, or of water as steam. Of the first, the most familiar example is the street dust, which in some localities fills the eyes of those driving or walking, producing sensations anything but agreeable. This is fortunately a cause which does not act sufficiently long to result in anything serious. Quite otherwise is it however, in mills for grinding corn, or wheat, or where other substances are reduced to a state of powder by filing, rasping, etc., and where persons engaged in the business are obliged to remain for hours in an atmosphere hardly respirable. In the same category, come those who labor in an air often dense with smoke, as employees on railway trains, together with those who work in rooms filled with steam, as laundresses, dyers and bleachers. Washerwomen for instance have often been noticed to suffer from conjunctivitis and in forms occasionally so intense, as to lead to the suspicion that it was communicated by some contagious secretion on the soiled clothes. Thus Galezowski* devotes an article to the precautions which these people should exercise in that respect. My own opinion is however, that it is due simply to the continual exposure of the eyes to the vapor and heat in the various rooms and the sudden changing from one to the other. A visit to a number of city laundries in this shows the methods of ventilation wonderfully imperfect. To a similar set of causes can be ascribed the conjunctivitis which sometimes attacks those engaged in boiling soap. In this process there is also one stage where the minute particles of slacking lime act as a chemical irritant, but in general, it is steam and heat that does the injury. Upon making inquiries regarding the frequency of such troubles, I find a proportion of over one-fifth in which chronic conjunctivitis shows itself in the eyes of those constantly in the "boiling room." The degree varies, however, with the susceptibility of the individual and the degree of incompleteness shown in ventilation. In a like manner, are dyers and bleachers exposed, but to what extent and with what effect, I am not aware. The number of persons liable to suffer from an atmosphere chemically injurious is naturally less, still they are to be found in labora-

*Traite des Maladies des yeux, p. 876.

tories, mines and sewers. When the gasses exist in these places in a diluted form, they act as irritants simply, but if concentrated may have the same caustic effect as the lime does in the eyes of whitewashers and plasterers.

In regard to the question of treatment, all such patients should, of course, make it their first care to avoid as much as practicable the cause of the disease. But whether they continue at their work or not, the usual astringent solutions of zinc, copper or tannin should be used. Together with this, it is an excellent plan to frequently wash out the string of mucous which collects in a roll between the lids and globe. It is well to vary the temperature of the water thus employed with the form of the irritating cause. In cases where this has been accompanied by heat, as in smoke or steam, the water applied should be cool, otherwise lukewarm.

The third class of employments comprises those, where there is a tendency for persons engaged in them to overtax the power of accommodation. The greater part are occupied in reading or writing and those who are not, have to do with small objects at a short range of vision. Here are to be included the school children, ministers, lawyers and physicians, copying clerks, book-keepers and the like, together with watchmakers, engravers, etc.

The effect of thus straining the accommodation manifests itself in the lens, retina, or both. In the former it has been thought to be an element tending to produce cataract. It is true that statistics are wanting on this point, but one of the best authorities in France* says he is convinced that "with those accustomed to reading, writing, engraving, etc., opacities in the crystalline almost invariably commence in the inferior and internal quadrant, while with farmers * * * the opacity begins either in the nucleus or in the periphery." Overtaxing the accommodation often manifests itself also in a feeling of fatigue in the eyes, a redness of the conjunctiva and increased flow of tears—symptoms, which, taken together, constitute asthenopia. But by far the most frequent result is the development of myopia (near sightedness). This fact is of such importance that it is worth while to dwell more particularly upon it both as to cause and prevention. In the majority of

*Galezowski—*Traite des Maladies des Yeux*, p. 411.

instances the myopia is brought on during school life as has been shown by the statistics of Dr. Cohn* from an examination of over ten thousand children. He then proved conclusively that it is due to badly arranged desks, poor light and other unfavorable conditions. When the disease occurs in late life it again follows the use of books; and in general, it may be set forth as a rule, that the degree of literary culture arrived at by any nation or class of individuals is in direct proportion to the number of myopic persons there found. This is an observation long since made by writers on biology† and ethnology, and upon which especial stress has been laid by Donders.‡

Before indicating the prophylactic measures to be taken in guarding against this condition, a few words should be said concerning the anatomical changes accompanying it.

The causes of the disease will suggest its treatment. In myopia—especially that form called progressive myopia—it is well known that the eye is lengthened from before backward, a condition named posterior staphyloma—the rays of light passing through the lens are then focused in front of the retina instead of upon it. Now this lengthening of the globe is produced by pressure from within or without. Intra-ocular pressure occurs whenever an unusual amount of blood is present in the nutrient arteries whether sent there by the force of gravity or by mental excitement—a stooping posture, or the act of weeping, are instances which illustrates the temporary effect of over distension of the globe.

Again, the tension may be increased by muscular action, when the eye is adjusted for a point in the distance, the four recti muscles exert an equal traction, but if it converge toward its fellow, as in the act of accommodation, then the external rectus is, so to speak, bent around the globe and presses unduly upon it.

Let us now apply these two principles to the treatment of, or the precautions against myopia, and see what the practical deductions are; intra and extra-ocular pressure will be found to originate in unnatural postures and light,§ for the reason is evident, to sit in a

*Untersuchung der Augen von 10,000 Schul Kindern.

†Herbert Spencer's Principles of Biology, Vol. 1, p. 249.

‡Accommodation and Refraction of the Eye, p. 342.

§Donders—Refraction and Accommodation of the eye, p. 419.

high chair at a low table, and bend over one's book in a stooping position will give to any eye, not unusually strong, a feeling of weight and discomfort. There has been blood pumped down the arteries faster than it could flow up the veins and an over-distension results. Intra-ocular pressure is then avoided by simply sitting erect. The lesson regarding muscular action is quite as practical. When the light is dim we bring objects nearer in order to see clearly, the nearer the object the more the eye conveys, and the greater the convergance the greater the tension. In the next place therefore we should have sufficient light. But this does not mean a dazzling blaze shining full in one's face. The light should come from above or behind, and if artificial, should be without glare or flicker. A grateful protection against these latter qualities is furnished by the lamp shades now commonly used, sometimes, however, they have the advantage of being colored, and of the various tints, it has been found by experiment, that the least objectionable is blue, while the most irritating are yellow or orange.*

In addition to a good position for reading and the proper amount of light, there is a third precaution to be taken whenever a feeling of fatigue is experienced in the eyes. It is to give them a moments rest. The accommodative apparatus requires relaxation from work as much as any other set of muscles in the body.

If, in spite of all care, symptoms of myopia show themselves, then the patient should not be afraid of wearing glasses too soon. The popular prejudice in this respect is unfounded.† A pair that will enable one in such a condition to read ordinary type at twelve or fourteen inches distant is none to strong.

The last class of occupations which we shall consider is that in which there is a tendency to the lessening of the sensibility of the retina. This definition is of necessity as vague as are the causes of disease to which it refers. Such defects of vision are met with in sailors after long voyages, or in soldiers after exhausting campaigns, also in painters, looking-glass silverers and workmen in India rub-

*Stellwag on the eye, p. 19.

W. White Cooper—Practical remarks on near and aged sight.

†Jefferies—The Eye in Health and Disease, p. 38.

ber factories.* In all cases the condition of the general health is much below par, and either presents the set of symptoms known as scorbutic, or else there are evidences of some particular systemic poisoning.

The dimness of vision thus resulting is called amblyopia, or when blindness is complete it is known as amaurosis. Two names these are which simply hide our ignorance regarding the anatomical changes giving rise to such symptoms. In fact, amaurotic affections may be defined as those in which the surgeon can not see anything abnormal, and neither can the patient see anything at all.

The treatment of such cases is constitutional and pre-eminently a matter of general principles. An important deduction concerning all these acquired imperfections is regarding their transmission from parent to offspring. That such instances do occur there can be no doubt, and of late many striking ones have been cited by authority beyond question in connection with the theory of evolution. Thus Bowman of London, has furnished Mr. Darwin with a number of such cases of inherited malformations and diseases of the eye.† At the same time the number of persons who are daily exposed to the dangers here enumerated, does not grow less. It seems then to be only a question of time before the tendency of civilized nations to the resulting affections, and especially to myopia, will be greatly increased, however, since the latter is, in most instances, contracted during school life, it becomes a matter worthy of serious consideration as to what measures can be adopted to obviate, as far as possible, the danger to which children in particular are subjected.

*Concerning the individuals so affected see

Sellwag—On the Eye, p. 773.

Wells—A Treatise on the Diseases of the Eye, p. 461

Hutchinson—On Lead Poisoning as a cause of Optic Neuritis.

Delpech—Memoire Sur Les Accidents que developpe chez les ouvriers en caoutchouc * *
Bul de l'Academie de Med.

†For these and other examples see

Darwin—Animals and Plants under Domestication, Vol. 2, p. 17; also

Huxley's review of the Origin of Species.

ART. II.—*Two Cases of Removal of Omental Tumor from the Scrotum.* By Prof. J. F. MINER, M. D. Reported by E. N. BRUSH, M. D.

It is believed that the rarity of cases similar to the two following, and the operative procedures undertaken for their relief, will render a detailed account not uninteresting :

CASE I.—E. T. D., a druggist of Jamestown, N. Y., applied to Dr. J. F. Miner in October, 1873, for relief from what he and the physicians hitherto consulted had supposed to be enlarged testicle. From infancy he had been troubled with an enlargement of the scrotum on the right side which had increased recently as Mr. D. had increased in flesh. The patient was a healthy young man, aged about twenty-eight, weighing two hundred pounds. There was no evidence of any hereditary disorder, the tumor was not painful, and was only troublesome on account of its size and weight. There was no decrease in size in the recumbent position, nor could the growth be returned to the abdominal cavity, though it evidently extended into the inguinal canal.

The patient secured a private room at the Buffalo General Hospital, and made arrangements to have the tumor removed.

Oct. 15th. The patient being placed under ether, opportunity was afforded for a more careful examination than had hitherto been afforded. By careful manipulation the testicle, of normal size and apparently healthy, could be isolated from the growth, but the exact character of the tumor could not be diagnosed.

Drs. Hazeltine and Barnes, who were present, concurring in the propriety of the procedure, Dr. Miner carefully cut through the coverings of the tumor, making an incision about four inches in length, in line with the inguinal canal. After the walls of the scrotum were divided, a thin transparent sac was discovered (afterwards found to be a reduplication of peritoneum) containing what was apparently a fatty tumor of considerable size. This sack was opened and an effort made to remove the tumor. It was then discovered that it was a protrusion of omentum which had probably descended with the testicle in infancy, and had increased in size as the patient had grown fleshy. Following the protrusion up the inguinal canal it was found that it was firmly adherent on all

sides to the lower portion of the canal. The cord and testicle were found in a healthy condition. The mass of omentum had become unfolded to such an extent that it was impossible to return it within the scrotum, and the adhesions precluded the possibility, if desirable, of returning it to the abdominal cavity. Nothing remained, therefore, but to cut it away. A stout ligature was thrown around the mass at the lower end of the canal and the omentum cut away with scissors. The ligature controlled all hemorrhage and no vessels were ligated.

The incision was closed, leaving the lower angle open for drainage, warm water dressings applied and the patient placed in bed.

On recovering from the anæsthetic the patient complained of considerable pain, and one-fourth grain morphia was given hypodermically.

Oct. 16th. Some pain complained of during the night—pulse is 120.

17th. It was found necessary to draw the urine. Pulse 120. Anodynes continued to relieve pain.

18th. Pulse 114. Less fever, skin moist, some discharge from the wound.

20th. Scrotum swollen and painful; a free incision at lower portion gives exit to considerable pus and some debris of tissue. No abdominal tenderness.

21st. Pulse 96. Restless and imaginary. Sutures removed. The wound is united in the greater portion of its extent.

22d and 23d. Delirious. Pulse 120 to 130. Temp. 103°. Is given chloral hydrate which produces some sleep.

24th. Improving. From this date until his discharge the patient continued to improve, and on the 9th of Nov., he left for his home.

The mass of omentum removed weighed two and one-half pounds. Its dimensions were not taken, but when unfolded it covered a large space.

CASE II.—J. B.—, of Mt. Morris, was referred to Dr. Miner by Dr. W. W. Potter of that place. The patient is sixty-five years of age, in apparent good health, and weighed three hundred and twenty pounds. Has increased in flesh to a large amount during the last eight years.

He had never had hernia, and previous to his increase in flesh never noticed any growth in his scrotum. Eight years ago he began to notice an enlargement in the right side of the scrotum, which was at first pronounced varicocele, but no palliative treatment was undertaken.

This growth gradually enlarged until its size and weight became oppressive, and Mr. B. consulted several physicians in regard to it, but no one gave a decided opinion as to its nature. A prominent surgeon in Boston declined to give an opinion as to its nature. Two surgeons in New York State were consulted but advised no treatment except a suspensory bandage.

When he consulted Dr. Miner, the tumor had attained such a size that the penis was entirely obliterated, the preputial orifice alone being seen at the top of the tumor. The tumor had a peculiar feeling, which gave almost the sensation of fluctuation, and to assist in the diagnosis a small exploring trocar was introduced. Nothing escaped from the trocar except a few drops of serous fluid and a small amount of oily matter. This, together with the feeling of the tumor, convinced Dr. Miner that an opinion which he had previously formed was correct, that it was enlarged omentum. Upon being told the diagnosis made, Mr. B., who was a man of intelligence, and understood the nature of the case, asked if it could be removed. He was answered in the affirmative, and the risks of the operation fully explained to him.

He at once decided upon an operation and the following day was appointed as the time.

July 21st.—The patient having been placed under the influence of ether, Dr. Miner removed the tumor in the presence of Drs. Bartow, W. W. Miner, and the writer. The mass was found inclosed in a peritoneal envelope as in the first case, and firmly adherent to the margins of the inguinal canal. After satisfying himself that no intestine was included in the mass, a ligature was carried around it as high up as the adhesions would allow, and the tumor cut away with scissors.

Upon examination of the mass a concretion was found imbedded in its folds the size of a walnut of a hard cartilaginous nature. Mr. B. had called attention to this previous to the operation and said

that it first made its appearance when straining at stool one day, accompanied by slight pain, which soon passed away. The omentum removed did not differ from that seen in fleshy persons in the natural position, it was several inches in width and length and weighed a trifle under three and one-half pounds.

Mr. B. did well until the twenty-third, when he seemed stupid but was easily aroused and answered questions in a clear manner. On the 24th the stupor had increased and was accompanied by evident paralysis of the lower limbs. The urine had to be drawn and the patient assisted whenever he wished to move.

It may here be stated that some weeks previous to the operation Mr. B. had been paralyzed on his left side, from this he had however, apparently nearly recovered.

On the 25th pain and tympanitis appeared in the abdominal region, which gradually increased with nausea and vomiting, and on Monday the 26th, the patient died of peritonitis. It is however safe to say that this result would not have followed had the patient been a younger man, and in a better condition to stand the operation. It was hoped that the adhesions at the abdominal ring would prevent the inflammation from extending in the abdominal cavity. It is frequently the case that large portions of omentum have to be removed in operations for hernia, but I am not aware of the report of a case similar to the two preceding ones. That so large a mass of omentum should form in the scrotum seems at first a little remarkable, but from the nature of the two cases, their tendency to obesity, it could be surmised was it known that a portion of omentum had descended to form the nucleus for further growth.

The surgery of omental growths is not as yet clearly defined, and the report of these two cases may be of value in elucidating the subject.

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ART. III.—*Abstract of the Proceedings of the Buffalo Medical Association.* Reported by JOSEPH FOWLER, M. D., Sec'y, *pro tem.*

TUESDAY EVENING, July 6, 1875.

The Association met at their rooms in the Medical College, at the usual hour.

The President, Dr. GOULD, in the chair.

Members present: Drs. Gould, Rochester, Wetmore, Howe, Mc Niel, Boysen, W. W. Miner, T. M. Johnson, Daggett, Abbot, Samo, Van Peyma, Shannon, Wyckoff, Fowler and Drs. W. H. Johnson, Dorr and Mynter upon invitation.

On motion of DR. ROCHESTER, Dr. Fowler was appointed Secretary *pro tem*.

Reading of minutes of last meeting dispensed with.

The application for membership of Dr. Herman Mynter was received, and, on motion, it was referred for one month in accordance with the usual regulations, and the doctor invited to participate in the proceedings of the meetings until such time as was necessary to qualify for membership.

The committee appointed at the last meeting to investigate the charges preferred against Dr. J. J. Walsh, submitted a report.

DR. ROCHESTER moved that the report be accepted. Adopted.

DR. HOPKINS moved that the usual order of business be suspended for the purpose of taking up the matter contained in the report and disposing of it. Carried.

In the absence of Dr. Lothrop, chairman of the committee of investigation, Dr. Wetmore moved that Dr. Hopkins officiate as chairman of said committee, and read the evidence taken in the investigation of the charges preferred against Dr. Walsh. Adopted.

After Dr. Hopkins concluded reading such evidence, the Association proceeded to ballot either for expulsion, suspension or reprimand.

The Chair appointed as tellers Drs. Rochester and Boysen.

The result of the vote was as follows:

For expulsion, 10,
For suspension, 2,
For reprimand, 2.

The President then declared Dr. John J. Walsh expelled from the Association.

DR. HOWE then read a paper on the *Influence of Various Occupations upon the Eye*,* and ended by presenting two illustrative cases, the first was an example of the accidents frequent among those who manufacture steel instruments or use them in cutting metals. The patient was a boiler maker. Ten weeks before was

*See Art. I. Pg. I.

struck by a small chip from his chisel upon the left eye, a contused wound of the conjunctiva was produced at the inner side of the cornea one-quarter of an inch from its margin. Since then his right has been gradually failing. An examination shows a widely dilated pupil through which flocculent bodies could be readily seen floating in the vitreous, after each motion of the eye. These were portions of the retina detached by the blow together with coagula which might be partially absorbed in time.

The other case was one familiar to Buffalonians generally. He was the negro beggar, who, for the last seven years had plied his vocation at the corner of Niagara and Main streets. Formerly he had been a whitewasher, a class of persons whose eyes are continually exposed to the drops of falling lime. He had met with such an accident. As a result of the repeated irritation an inflammatory process was in both eyes had been set up in the conjunctiva and cornea which was transmitted to the iris, leucomatta covering both pupils, and extensive posterior synechia followed. In spite of the latter complication Dr. Howe, with Dr. Abbot, performed an iridectomy, giving the patient vision sufficiently acute to enable him to pursue any ordinary occupation without difficulty.

Dr. H. R. HOPKINS said the Association was under great obligation to Dr. Howe for the address, which was both instructive and suggestive; that the doctor had given us information upon a class of diseases which the profession at large were quite as much interested in as the specialist.

That the subject as treated was peculiarly interesting, from the fact that the text-books usually found in our offices, have little or nothing to say upon the matter, and again as being a contribution to the literature of "preventive medicine," which was of such prominent importance that nothing connected with it could avoid prominence, and this reminded him of what he wanted to say.

That in digging the tunnel for the water works under the Niagara river, the workmen were nearly disabled by a conjunctivitis caused by the sulphurous vapor emitted from certain crevices in rock. That this was of so serious a matter, and so much of an obstacle that the contractors offered thousands of dollars for any means which would relieve the men from the disease.

Dr. ROCHESTER asked what evidence there was that the ophthalmia was dependent on the sulphurous vapor.

Dr. HOPKINS replied that the disease did not appear till the seams emitting this vapor were encountered, and the continued existence of the ophthalmia while the sulphurous vapor was present.

On motion of Dr. WYCKOFF the thanks of the Association were extended to Dr. Howe for his interesting address.

The President appointed Dr. Abbott as essayist for the next meeting.

Prevailing Diseases—A mild form measles.

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MEDICAL NOTES.

ART. I.—*Notes on Surgery.* By W. W. MINER, M. D.

1. Least Sacrifice of Parts as a Principle of Surgical Practice. By THOMAS BRYANT, F. R. C. S. (*London Lancet*, April and May, 1875.)

2. Resection of Metatarsus, Anterior Tarsus, and parts of Astragalus and Os Calcis. Recovery with Useful Foot. By P. S. CONNOR, M. D. (*American Journal Medical Sciences*, July, 1875.)

3. Recent Improvements in the Details of Antiseptic Surgery. By JOSEPH LISTER, F. R. C. S. (*London Lancet*, June, July, Aug., 1875, et seq.)

4. Clinical Results of Lister's Treatment of Wounds, and substitution of Salicylic Acid for Carbolic Acid. By Prof. C. THURMERSCH, Leipsic. (*Volkmann's Collection of Clinical Lectures*. Nos. 84 and 85.)

5. Comparative Antiseptic Properties of Salicylic and Benzoic Acids. By Prof. E. SALKOWSKI. (*Berliner Klinischer Wochenschrift*, May 31st, 1875.)

I. A recent article in the *Lancet* which is indicative of the remarkable results obtained in this country and abroad, in cases of injury or disease affecting the bones and joints of the tarsus, is one by Thomas Bryant, Surgeon to Guy's Hospital, and author of *Bryants Practice of Surgery*. He gives the history of several of his own cases in which removal of bone was practiced, with good results. Beside removal of the scaphoid, internal cuneiform, and base of metacarpal bones, he gives cases in which he removed portions of dead bone which had been the articular surface of the os calcis, also the lower half of the astragalus, with good recovery.

Mr. Bryant advocates free incisions into a diseased joint and removal of any diseased bone that may be the cause of trouble, without excising the joint surfaces. As soon as it becomes evident, from the formation of abscesses or sinuses, that suppurative disease of a joint has taken place, he makes a free incision, removes any sequestra or diseased bone that may appear, and leaves the parts in a condition for a natural process of repair. He says:

"I feel more convinced year by year that disorganized joints are more amenable to direct local surgical treatment than is generally supposed, and that free incisions into joints, and the removal of necrosed bone from joints, are both excellent and successful operations.

A free cut into a suppurating or disorganized joint whether associated or not with bone disease, is rarely followed by any other than a good result. When the suppurating process is due to synovial disease, a recovery without further surgical interference may be looked for. When due to local necrosis, the incision helps nature towards the recovery of the cases by expediting the process of exfoliation, and the subsequent removal of the bone by either natural processes or some surgical proceeding, and in still more severe cases, the incision gives relief, and in no way tends toward inducing any increase in the mischief."

After giving the histories of some twenty or thirty cases, more or less illustrative of this plan, he concludes:

"I trust this series of cases is enough to demonstrate with sufficient clearness, the value of the practice I am now inculcating, and to show that in a large number of cases of disease of the joints, a cure may be secured by a simple incision into the affected joints and the removal of the necrosed bone. This series includes examples of disease of the shoulder, elbow, hip, knee, ankle, and great toe joints, and I do not think I should be far wrong if I were to express my belief that in many of these cases, if not in all, many surgeons, more particularly those who are advocates for excision—would have excised the joints and some few would have amputated. I am not here however to condemn their practice, for their results might have been good; but whatever they might have been, they would have been secured by severe opera-

tive measures, and consequently by dangerous risks, whereas in the treatment I am now advocating, the surgical proceedings are simple, and are attended with a minimum of danger. The success of the practice I have recorded was also great—indeed, it has been so good, that I am induced to express my belief that almost all operative measures upon diseased joints, should be in a measure exploratory, in order that necrosed bone if present may be taken away, and the case then left to natural processes; with Esmark's bandage this practice is rendered more simple and is consequently likely to be more satisfactory."

II. Prof. P. S. Connor, M. D., of Cincinnati, gives the history of a case of disease of the tarsus, following injury, in which he removed all the bones of the foot between the astragalus and calcis posteriorly and the phalanges in front. He presents a cut of the extremity as it appears after recovery, and says it forms a very excellent basis of support, and that the ordinary movements of walking are well performed. Accompanying his case, he presents a tabular view of thirty-five recorded cases, with name of operator, parts removed, results, where recorded and observations thereon.

III. Professor Lister is still very enthusiastic in his researches for the advancement of antiseptic surgery. Besides the carbolic lotion, varying from one to five per cent. in strength, he uses the watery solution in the form of atomized spray, and prefers for this purpose, and ordinarily, to have the solution of two and one-half per cent. strength; one per cent. being that formerly recommended in his address before the British Medical Association in 1871. A favorite method of dressing with him now is that of antiseptic gauze. This is common thin gauze which has been permeated with a mixture containing one part of carbolic acid, five of resin, and seven of paraffine. Eight layers of this antiseptic gauze are successively applied to an open wound, and outside of this is carefully wrapped a piece of cloth which has been rendered impervious by a coating of caoutchouc. It is intended that such dressing should remain undisturbed for from two days to a week. Carbolic oil he generally uses of a five per cent. strength. Chloride of zinc he has found very efficient to prevent extension of

suppurative processes. A single application of it, forty grains to the ounce is used. Boracic acid he has found a useful antiseptic remedy. Boracic lint is prepared by dipping lint in a saturated watery solution of boracic acid heated to near the boiling point, and then allowing it to dry. It is used as a dressing for indolent ulcers; is dipped again when used, in a cold watery solution of the same and applied after a vivifying application of chloride of zinc has first been made. This acid is much more soluble in hot than in cold water; near the boiling point, water takes up one-third its weight, at ordinary temperatures one twenty-sixth its weight of the acid. He uses boracic applications in skin grafting, burns, fresh wounds, etc. An ointment of boracic acid is sometimes found advantageous, and he advises the following mode of preparation:—Boracic acid finely levigated, and white wax, each, one part; paraffine and almond oil, each, two parts; mix these thoroughly by heat and trituration.

Accounts of the visit Professor Lister is making through the German cities, where he has been enthusiastically welcomed, represent him as saying that he has found salicylic acid inferior in value to carbolic acid. This statement was made at Leipsic, the home of Professor Thiersch, who is an interested observer of the action of salicylic acid, and who has published important articles upon this new agent, which is now having extensive trial among the profession.

V. Professor Salkowski, of Berlin, has been making experiments with various disinfectants to determine their relative value, and as between salicylic and benzoic acids, he reports results markedly in favor of benzoic acid. Salicylic acid in concentrated aqueous solutions will retard putrefaction, but not prevent it. It is not a deodorizer in other sense than that of hindering putrefactive change. Salicylic, as well also benzoic acid, which he says has stronger antiseptic properties, are alike unfitted for internal use, because they are converted in the blood into salts of soda, whereas phenol and allied substances will pass unchanged through the system. His statements in this respect are opposed to those of Kolbe's, and time is required to determine the value of salicylic acid which has many advocates now among experimenters.

ART. II.—*Notes on the Treatment of Syphilis.* By E. N. BRUSH, M. D.

1. Clinical Contributions to Syphilidology. By Drs. VAN BUREN and KEYES. (*Archives of Dermatology*, January, 1875.

2. On the Use of Mercury in the Late Stages of Syphilis. By F. R. STURGIS, M. D. *American Journal of the Medical Sciences*, January, 1875.

3. On the Antecedents and Treatment of Tertiary Syphilis. By C. R. DRYSDALE, M. D., London. (*The Doctor*, April 1, 1875.) (Pamphlet Baillière and Co.)

4. The Treatment of Syphilis. By CHRISTIAN BÆUMLER. *Art. Syphilis. Ziemssen's Cyclopædia.* Vol. III, p. 271.

5. On the Use of Iodide of Potassium in Syphilis. By JOSEPH R. BECK, M. D. *Philadelphia Medical Times* March 13, 1874.

6. On the Nature of Syphilitic Affections, and upon the Mercurial Treatment. (*Sur la nature des affections syphil. et sur le traitement mercuriel.*) (*Gaz. des Hôpitaux*, January 12, 1875.)

7. A New Anti-Syphilitic, Tayuya. By M. STANISLAS MARTIN. (*Bull. Gén. de Thérap.*, No. 12, 1875.)

I. The two cases related in this article are briefly as follows:

1. A physician while a student, contracts a chancre. This is followed by a slight papular rash, for which beyond a laxative no medicine is taken. In time the rash disappeared and was not followed by a successor. Nine years afterwards a swelling appeared upon the cranium, this node remained hard and received no attention for *eleven years*. After a severe illness lasting several weeks, the node softened. It was opened but instead of healing the edges sloughed, leaving the bone bare over a circular area of more than two inches in diameter. At the time he was seen the size of the sequestrum could not be determined, as it had not yet separated.

2. A western gentleman contracted a urethral chancre, in one year he married and had one healthy child. In twelve years he had some ecchymatous spots upon his legs. He went to New York, and was treated by a specialist in venereal diseases by arsenic, but neither at this time nor previously did he take mercury. The sores on his legs got well and their site is occupied by scars character-
 istic of a syphilitic lesion. One year later at the age of forty-seven the patient had brain trouble, loss of memory, double vision, etc., accompanied by loss of flesh, and a poor condition of general health. His physician told him he must give up work and go to

Europe. This he did, taking the physician also. In Paris a prominent specialist in Nervous Diseases told him that he was threatened with apoplexy and agreed with his physician as to the impending softening. Time and Hygiene improved his condition and he returned to America. After some months he consulted Drs. Van Buren and Keyes, for "tertiary gummy infiltration of the soft palate with rapidly advancing destructive ulceration along the posterior border." Under Iodide of Potassium improvement commenced and progressed with great rapidity.

These two cases are such as will furnish plenty of material for reflection, and may be of some value to those who insist that the administration of mercury is the cause of the appearance or severity of the tertiary lesions.

The authors draw the following facts from these cases. That they go to strengthen the views that,

1. The evolution of syphilis may be mild and irregular, even where no mercury is used early in the disease.
2. With the mildest beginnings in syphilis (untreated,) the most terrible consequences may occur after years of quiescence.
3. The severity of tertiary lesions does not depend upon previous use of mercury.
4. The efficacy of iodide of potassium properly employed, is not dependent upon a previous use of mercury.
5. A father with syphilis may have a perfectly healthy child.
6. Specialists and experts are liable to be deceived as to the significance of symptoms in a given case, and their authoritative position should call for the exercise of extreme caution in the expression of opinion for their responsibility is great.

II. In this article Dr. Sturgis makes a plea for mercury in the treatment of syphilis. He does not wish to be considered as believing it to be a specific, but claims that it is the most trustworthy weapon which we have with which to fight the disease.

The point to which he calls attention, is the use of mercury in the later and deep lesions of syphilis, the so-called tertiary stage.

Two cases are reported in detail, in which the iodide of potassium was used for a long period with but little improvement, and

in which a marked change for the better was noticed when mercury was administered.

Dr. Sturgis believes in large doses of iodide of potassium, continued until the result is reached or the patient's condition demand their suspension. His favorite method of administering the mercurial is by inunction, employing for this purpose the oleate of mercury of the twenty per cent. strength.

III. The paper by Dr. Drysdale is of great interest in connection with the use of mercury in syphilis. He has been for many years an opponent to the use of mercury in syphilis, but has become convinced by his own observations and the teachings of Fournier and Hutchinson, that mercury may be used with benefit. He still denies its value in the tertiary stage, but more extended observation may convince him of its value in these conditions. In view of the dogmatic and frequently intolerant assertions of the anti-mercurialists, statements such as these coming from a man holding the position that Dr. Drysdale does, are of especial interest.

IV. Over three hundred pages of Ziemssen's Cyclopædia are occupied with the discussion of syphilis from the pen of Prof. Bæumler. The author does not pretend to speak from his own authority, but aims rather to give a view of the more recent and generally accepted views upon this subject. As a whole, the section upon treatment is quite satisfactory, although the author seems, on page 108, to make a sufficiently clear distinction between the soft or non-infecting chancre, and the local sore of syphilis, his directions in regard to cauterization would lead the reader to suppose that he was of the opinion that thorough cauterization of the syphilitic sore would sometimes prevent the appearance of further symptoms. Those who follow this rule will find themselves doomed to disappointment, no amount of cauterization, we believe, will prevent the occurrence of syphilis after the contraction of a *true syphilitic chancre*, if the patient lives long enough. In those cases where this result does not follow, we hold that a mistake in diagnosis has been made, or that the case is one of those exceptionable ones in which the local sore is not followed by other appreciable symptoms for periods extending sometimes over twenty or thirty years.

Iodoform as a dressing for primary lesions and sores upon the genitals is mentioned. Its use is advised in phagednic ulcers, but Izard who has experimented considerably with this remedy, declares that while it is highly beneficial in certain other conditions in phagednic sores it is of no value.

The use of mercury is advised as soon as the syphilitic character is decided upon, the author believing with some that the secondary lesions may be greatly lessened or warded off altogether by such a course. The importance of the systematic conduct of the treatment is insisted upon. On page 290, the dose of van Swieten's liquor should read from one to two fluid *drachms* instead of *ounces*.

The various excellencies or defects of the different forms of mercury are dwelt upon to some extent, and their modes of administration detailed.

Iodine and its various preparations and the treatment of the late stages of syphilis receive due attention. Nothing new is said in reference to the treatment of hereditary syphilis. Of syphilization he says: "The method is not likely to obtain the confidence of physicians or meet with the approbation of patients."

V. It is a pity that Dr. Beck did not read the two cases reported by Drs. Van Buren and Keyes (I) before writing his article and attempting to furnish food for contemplation. The two cases that he cites as proving the lack of value of mercury and the superior importance of the treatment by iodide of potassium are clearly testary in character, and do not present anything astounding in the fact that they *improved* (Dr. Beck says were entirely *cured*,) under the use of iodide of potassium alone.

VI. The paper of Herman is a curiosity which aptly illustrates the extreme views held by some anti-mercurialists. He draws three conclusions:

1. Syphilis is a local disease, the consecutive forms of which bear close relations to the original lesion.
2. Mercury should be banished from its treatment.
3. What are termed constitutional lesions are the effects of mercury.

VII. Tayuya, the new anti-syphilitic announced by M. Martin, is of South American origin, and the stories told of it resemble those

told of eundurango, and the new aphrodisiac damiana. We are not inclined to condemn it, however, without trial, and shall watch for further communications from M. Martin. He says that M. Ubicini, while traveling through Brazil, came across a population of negroes who used this remedy in the cure of syphilis. M. Martin publishes the results of some eight experiments made by him to discover the origin of the bitter taste of the plant. No alkaloid was discovered; however, besides a green resin brown extractive matter, tannin glucose starch and oil, the mineral substances, alumina, iron, lime, potash, etc., are so numerous that they fall in a white powder when an aqueous decoction is acidulated with acetic acid. M. Martin promises further details in a future number.

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MISCELLANEOUS.

Extirpation of a Tumour of the Bladder.

Dr. Carl Gussenbauer reports (*Boston Med. and Surg. Journal*, July 8, 1875,) the following case of myoma of the bladder which deserves attention, as the tumour was correctly diagnosed and extirpated with an unexpectedly good result; also as the method of operation has never heretofore been employed, and, further, since microscopical examination proved the tumour to be of a variety rarely occurring in the bladder.

On June 3, 1874, D. J., a boy twelve years of age, was admitted to the clinic of Prof. Billroth, suffering, according to his father's statement, from stone in the bladder. He had been troubled for ten months. The first symptoms were pain after passing water, localized in the glans penis and in the region of the bladder. After a while severe attacks of painful micturition set in, which in the course of ten months became more frequent, and often came on so suddenly that the boy could not prevent a sudden discharge of urine. At the time of admission the patient was obliged to pass his water every ten minutes, a small quantity each time, with frequent and severe pain, partly in the region of the bladder and partly in the glans. Urine was feebly acid, slightly cloudy, but contained nothing characteristic on microscopical examination except a moderate quantity of pus corpuscles and a few cells of bladder epithelium.

On examination a tumour was noticed in the region of the bladder, to the left of the median line. It was to be felt through the

abdominal walls; it was apparently about the size of the fist, was hard and somewhat sensitive on pressure, slightly movable, attached apparently to the bladder. Per rectum the tumour was also felt. On introduction of the sound it was also found to slide over an uneven surface. On careful examination it was noticed that the beak immediately on entering the bladder was pressed forward; and on attempting to move it from one side to another it always slid over an uneven tumour before reaching the back of the bladder. The combined examination with sound and finger, per rectum, proved clearly that a tumour connected with the back of the bladder hindered the movement of the sound. The consistence of the tumour was that of a fibro sarcoma, and the size that of a small fist.

The rapid growth of the tumour demanded energetic treatment, as it promised, in the state of suffering in which the patient then was, soon to end his life.

The operation of extirpation was performed on June 15. 1874, in the following way: After the patient was narcotized the lateral incision for removal of stone was made. The finger introduced into the bladder showed immediately that a tumour nearly the size of the fist, with an uneven surface, projected from the posterior wall and extended towards the top of the cavity of the bladder. Owing to its size, it was found impossible to extract the tumour, with the finger, from the perineum. A supra-pubic incision was then made, without injury to the peritoneum, and to give sufficient room both recti muscles were cut across at their insertion; also a transverse incision into the bladder was made. Prof. Billroth soon came to the conclusion, after examining with the finger, that the use of the écraseur was not practicable or desirable, as the tumour possibly might be already adherent to the peritoneum, in which case the latter would have been so injured as to delay healing. He therefore decided to tear the tumour with his finger near its base and to cut out the remainder from the wall of the bladder, after passing a ligature round to check bleeding. The extraction of the torn pieces of the tumour was not so easy, in spite of the large size of the incision, as would have been supposed. In dissecting out the pedicle it was necessary to turn the bladder partly inside out. It then appeared that the tumour took its origin from the mucular coat of the bladder, but had not attacked the outer coat or the peritoneum. The plan was, in case the peritoneum had been opened, to close the hole with sutures. Two arteries were tied and the ligatures brought out through the upper incision in the bladder.

The wound in the bladder was not closed, as primary intention was not probable after the tearing which the size of the tumour had made necessary. To prevent the flowing of urine over the upper wound (so often the cause of pericystitis after the supra-pubic operation), a drainage tube was drawn through the bladder and brought out at the incision in the perineum, in the expecta-

tion that the urine would flow through the tube. This proved to be correct, but only when the tube was pushed so high up that it appeared over the symphysis. The walls of the bladder were pressed together by the weight of the intestine; consequently the urine collected in the place where the resistance was the least, *i. e.*, above the bladder. If the opening in the drainage tube was at this place, the urine ran off by the perineum. If, however, the position of the tube was altered, the urine collected (as is the case always in the high operation for stone when the wound of the bladder is not closed) until it reached the level of the skin, and flowed over the abdomen, no urine at all passing through the drainage tube. I mention this apparently trivial circumstance as I became convinced, on observing the course of the case, that the drainage tube especially contributed to the favorable result in the case. This was remarkably good, considering the apparently severe operation. The tripple wound caused hardly any reaction—rarely the case even in successful cases of lithomy. There was no inclination to a pericystitis or infiltration of the subcutaneous tissues, nor the slightest peritonitis. The first two days after the operation the patient's temperature was 37.8° C. (100° F.) and 38.8° C. (101.8° F.). On the third day the evening temperature rose to 39.6° C. (103.4° F.), but on the fourth day it sank to 38.2° C. (100.6° F.). On the sixth day there was no fever. On the fifth day after the operation, as the wound was granulating well, and there was no danger of infiltration of urine, the drainage tube was removed. The wound, on the twelfth day after the operation, was so small that the urine came partly by the urethra. The patient was discharged July 18, perfectly well, wearing a pad to counteract any tendency to hernia.

The tumour was eight centimeters long, four broad. Its largest circumference was eighteen centimeters, its smallest thirteen. It sat directly on the muscular layer of the bladder. Its base was seven centimeters in circumference. There was no ulceration, the surface was smooth, but an epithelial coating was not to be determined without the microscope. From its consistence, its appearance, and that of the cut surface, it would have been regarded as a soft fibroma. But the remarkable friability made it improbable that it was an ordinary fibroma. The friability was as marked as one usually sees in spindle-celled sarcomas only. But a merely superficial microscopical examination was sufficient to determine that the tumour was a myoma.—*Monthly Abstract Med. Sciences.*

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Artificial Respiration in Apoplexy.

In a recent number of the *Gazetta d' Italia*, Dr. Corso, the assistant to the chair of Physiology at Florence, advocates the use of artificial respiration in cases of "fulminant" apoplexy, and of

compression of the brain by hemorrhage or other causes. The immediate cause of his remarks was a case related in the same paper, in which a Dr. Despalles, of Brussels, employed the inhalation of oxygen in a case of apoplexy with hemiplegia with a successful result, the sensibility and power of movement returning in four hours. Dr. Corso claims that artificial respiration was first employed for apoplexy in Prof. Schiff's laboratory, and quotes the opinion expressed by Schiff in his lectures on the nervous system, published in 1866, that in cases of fulminant apoplexy produced by paralysis of the medulla oblongata, artificial respiration should be used, and never bloodletting. In 1871, Schiff also made numerous experiments on animals, and established the fact that the only way of preserving animals suffering from apoplexy, due to compression of the brain, from certain death, was artificial respiration. The explanation of this fact is that the immediate cause of death is paralysis of the respiratory centres by compression of the medulla oblongata, and the consequent non-oxygenation of the blood. The advantage of artificial respiration over the inhalation of oxygen is that it lowers the pressure of the blood in the intra-cranial vessels, and thus lessens the tendency to further hemorrhage.

In support of these views Dr. Corso relates a case in which he claims to have employed artificial respiration for the first time in such cases in the human subject. It was that of a lady who fell backwards and sustained a fracture of the skull. When seen, she was cyanotic, insensible, breathing slowly and superficially, the pulse also was infrequent and very feeble, and death seemed imminent. Artificial respiration was immediately performed, and continued for twenty minutes; under its influence the heart's action increased in force and frequency, the respiration became natural, and consciousness returned. The patient did not, however, completely recover, but died fifteen days afterwards from the laceration of the brain caused by the hemorrhage and fracture. Dr. Corso points out that had it not been for the irreparable lesions produced by the injury, the patient would have lived, and the artificial respiration give the brain and the medulla oblongata time to return to their normal functions, and hence a better chance of recovery, at any rate from the immediate danger.

There is no question that in many cases of coma due to compression of the brain, and also in that produced by opium or alcoholic poisoning, artificial respiration might be used with advantage; perhaps also in cases of so-called "congestive" apoplexy; but it seems to us open to grave doubt whether it would be applicable to cases of severe cerebral hemorrhage. The fear of increasing the hemorrhage should make us hesitate to adopt it until clearer proof is given that the restored action of the heart would not increase the pressure in the cerebral arteries and destroy that quiescence in which seems to lie the only chance of recovery in many cases. The difficulty in diagnosing the exact cause of the apoplexy will also

stand in the way of any general employment of this method, except where it affords the only chance of obviating immediate death. *London Lancet*.—*Phil. Medical Times*.

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Excision of the Knee for Chronic Disease of the Joint—The Antiseptic Method.

At Guy's Hospital, London.—Service of Mr. Howse.

This woman, aged 27, has at various periods during the last eighteen years suffered with attacks of inflammation of the right knee-joint, which she states began subsequent to variola. Five years since, the inflammation was more severe than previously, and left the joint stiff; but she continued to walk upon the limb until five months ago, when it became so painful that she was unable to move it. The least movement of the limb causes acute pain. There is a certain amount of swelling of the joint, and there is evidently softening of the crucial ligaments, for the tibia and fibula are luxated backward and rotated somewhat outward. If the limbs are placed parallel, the eversion of the foot on the right side is easily seen, and the presence of disease is shown by rubbing the bones forcibly together. The articular cartilages are probably eroded, though there may be no bone absolutely denuded of its covering.

As in a case of this kind there is no use in attempting to cure the disease, and as extreme measures must be adopted, excision of the knee-joint shall be performed, and it shall be done by the antiseptic method. The limb is elevated, and the blood rubbed out towards the trunk with the hands; then the elastic bandage is applied, not all the way from the foot, however, but only around the thigh. The next step is to anoint the integument with carbolized oil, after which a circular incision is made below the patella, with a knife previously dipped in the antiseptic solution. This cut opens the joint, and is followed by a gush of pus and blood.

During all this time the assistants keep up a continuous spray of carbolized water upon the parts, using large atomizers containing a watery solution (1 to 40) of carbolic acid, in order to destroy all germs that may be in the air or upon the hands of the operator.

After the joint has been entered, the flaps are dissected up and the patella removed, when the bones are found covered with granulations and the cartilage is readily peeled off. A saw, with the blade set at an angle, is applied to the posterior surface of the tibia, and a section of the head removed, in one portion of which is found a loose sequestrum. In the head of the tibia there are seen two points of caseous bone, one on each side, which are removed by applying the saw transversely and cutting a triangular groove.

The soft tissues around the end of the femur are next divided, and the condyles sawn off; a caseous point similar to those in the head of the tibia being found, it is removed by the gouge and saw. The presence of this disorganized bone proves the propriety of the operation in this case, which in past times would have been left without operative interference and merely placed upon a splint.

Ligatures are now applied to the bleeding arteries by passing a needle, threaded with carbolized gut, through the tissues behind the vessels, tying securely, cutting off the ends, and leaving the knot in the wound. The parts come together nicely after the excision, so as to make a straight limb, and are kept in apposition by gut sutures. Finally, the parts are covered with the dry antiseptic gauze recommended by Mr. Lister, of Edinburgh, and a roller applied to the whole length of the limb.

The removal of this diseased joint will render the patient much more comfortable, and, if all goes well, will give her a limb which will enable her to walk without any difficulty.—*Phil. Med. Times.*

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Use of Water in Typhoid Fever.

Dr. A. Luton, of Rheims, submits the patient to an *absolute* diet. The only drink permitted is water, which may be cooled with ice, and any quantity is allowed. At first the water is drunk with avidity, then with moderation, and at last with a certain degree of satiety. It is sometimes vomited at the commencement, but tolerance is soon established. Under its influence, the stools are at first quite abundant, then they become less frequent, are less fetid, and finally there is constipation.

The duration of the treatment is subordinate to the general progress of the disease, varying from four to eight days, taking the fever as it usually runs. In treating the *enteritis*, however, for which the remedy is especially intended, three or four days may suffice, after which the alimentation is gradually improved.

The theory of this treatment is easy to comprehend. It depends upon the fact of the rapid alteration of the alimentary substances, and especially of the sugars and feculæ in contact with the diseased surfaces, and the products which play the *role* of ferments, which they furnish. Acid, acid, and putrid substances result from this alteration, and increase the inflammation of the stomach and intestines.

These decompositions may be artificially produced by immersing animal membranes, a piece of typhoid-fever intestine, for instance, in a saccharated fluid. Alcoholic fermentation immediately commences, and in regular course follow the acetic, lactic, or butyric, and putrid fermentations. These take place at the ordinary tem-

perature; how much more rapid must they be in the diseased digestive passages where the temperature is so elevated!

By simply depriving the patient of food and sweetened drinks, this cause of irritation is suppressed, and the ferments are destroyed by inanition, their natural aliment being cut off.

The present method is applicable to the various cases of acute enteritis, and especially typhoid enteritis. In the hands of Dr. Luton the exclusive use of cold water as a drink, united with a rigorous diet, has become the best treatment of typhoid fever itself. The putridity, the subsequent adynemia, the visceral congestions, the sloughs of the sacrum, and the fuliginous condition of the mouth, all cease, as if by enchantment, whatever may be the theory.

The indications which may arise in each case should be fulfilled. Thus, at the commencement, if there should be much gastric trouble, an emeto-cathartic should be prescribed; in the pseudo-intermittent stage, sulphate of quinine; a fatiguing cough is checked by bromide of potassium in cherry-laurel water. As the general condition of the patient improves, the diet may be gradually improved. Give at first milk in small quantities, then broths, and at last meats and wine, if no relaps occurs.—*Mouv. Méd. and Trib. Méd.—N. Y. Med. Journal.*

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The Local Use of Chloral Hydrate.

Dr. Charles A. Peabody, House Surgeon to the City Hospital, at Worcester, Mass., makes the following report of his experience with the local use of chloral. (*Canada Med. Record*, May, 1875.)

I began to use chloral externally about ten months ago in Dispensary practice, experimentally. In this I was associated with Dr. E. Warner, also of the Dispensary staff.

It was first tried in a 5 grain solution, on a small unhealthy ulcer of the leg, with most gratifying result; the dirty unhealthy surface of the sore became clean, healthy granulations sprang up, and the ulcer was soon healed.

After this many ulcers of this kind were treated in this way, and with uniform success, they beginning at once to assume a healthy aspect and soon healing. It was found advisable, however, usually to reduce the strength of the solution to 3 grs. to the ounce of water, after the first two or three days, as it seemed to be then too stimulating.

Encouraged by this success we began to extend its use to chronic eczema, one very aggravated case of which I have in mind, which was at once much relieved, and within two weeks almost entirely cured. In this case a three grain solution was used from the first, and no other application whatever was allowed.

I have also found it to be, in varying strength, a most excellent

application in cases of offensive perspiration and offensive discharge. It has not the powerful and persistent odor of carbolic acid, and is in many cases to be preferred.

In hospital practice the chloral wash has not disappointed my expectations. I have in mind two cases where its good effects were very marked. The first case was an amputation of the thigh, performed for disease of the limb. The wound was dressed with carbolic acid; the flaps did not unite at all, but the cut surfaces assumed, after a few days, an unhealthy look, and became covered with patches of membranous character. Chloral 4 grs. to the ounce was applied, and the very next day all the membranous patches had disappeared, the wound began to look healthy, and granulations were seen springing up over nearly all its surface.

The other case is in hospital now: the foot was amputated through the metatarsal bones for railroad injury. The healing process progressed slowly for a while, and then seemed to come to a stand-still, and for two week no progress whatever could be detected, but the surface of the wound assumed a dirty, unhealthy appearance. Then a 5 gr. chloral wash was applied with immediate good effect. The next day the wound looked healthy, and the process of repair seems now, after three days' use of the chloral, to be fairly started into activity.

Thus, I have briefly indicated the results upon which I base my very favorable opinion of chloral as an external application. Of course, if used indiscriminately and unskillfully, it may disappoint, but it has its place, and if intelligently and judiciously used will not fail, I think, of giving very general satisfaction.

There are a few points worthy of notice in which chloral in solution compares favorably with carbolic acid; these are as follows:

1. It does not have the unpleasant smell of carbolic acid, while it is yet a very excellent deodorizer and antiseptic; it will even, in great measure, deodorize carbolic acid itself.

2. It is a much neater and cleaner dressing than the carbolized oil which is so frequently used.

3. It does not stain or rather fix stains, as carbolic acid does; an important consideration where sheets, etc., are of any value.

4. It does not "kill granulations" as carbolic acid does, but stimulates them.—*Monthly Abstract Med. Sciences.*

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On Sympathetic Ophthalmia.

In the *Berliner Klinische Wochenschrift*, April 5th, will be found a concise historical sketch, by Dr. Grossman, of the phenomena which make up what is now termed sympathetic ophthalmia. According to this writer, the nature of the affection was first recognized by the Vienna School in the early part of this century, although it was Mackenzie who in 1844 first described a

variety of sympathetic iritis. The writings of later surgeons, and especially those of Von Graefe and Mooren, agree in the doctrine that the starting-point of the disturbance in the second eye is to be found in the presence of cyclitis in the eye originally injured or affected. In accordance with this, Dr. Grossman gives a very complete clinical sketch of the symptoms of cyclitis, and enumerates at length the many circumstances under which it may take its origin, such as injuries of all kinds, with or without any external wound; also certain intraocular causes, such as tumors detachment of the retina, anterior synechia, extensive posterior synechia, and the varieties of anterior staphyloma, most of which are not generally recognized as possible causes. As regards treatment, when once any structural alteration has taken place in the second eye, the removal of the offending eye must be immediately carried out. If performed sufficiently early, Grossman has found that iridectomy will be found of great use to the second eye, provided it be completely executed and to a considerable extent; otherwise it will prove of no service; and if its performance be delayed till the iris has contracted adhesions, or has become extensively altered in texture, the operation will be impracticable owing to the impossibility of removing any of the iris, and the probable result of such unsuccessful interference will be degeneration and atrophy of the entire globe. Should, however, the iridectomy be performed early enough, in the course of time, it may be of many months, the eye may regain some considerable amount of useful vision, although it is probable that extraction of the lens will have to be undertaken to bring about even this partial recovery. From many cases of the kind Dr. Grossman chooses, as an illustration of his remarks, the case of a man, aged twenty-three, who was struck in the left eye with a small splinter of iron; for this injury the man was under treatment for nine months, at the end of which time he resumed work, but was compelled to discontinue it at the end of a week in consequence of the ciliary irritation which made its appearance in the right eye. These symptoms rapidly ripened into those of iritis, and he now came for the first time under the author's care. The left eye, which was blind, shrunk, and painful, was removed, and at once the symptoms in the other eye were alleviated; at the end of a month a large iridectomy was successfully performed, and a steady and still further improvement took place; in the result, the natural and healthy appearance was restored, and the patient regained very useful vision= $\frac{2}{3}$. Examination of the enucleated eye revealed a splinter of iron embedded in the ciliary region. Dr. Grossman insists on the importance of publishing such cases in great detail, in order that those members of the profession who are not practising ophthalmic surgery may be sufficiently alive to the danger and to the insidious nature of this form of ophthalmia.—*London Medical Record*, May 19, 1875.—*Monthly Abstract Med. Science*.

ON THE INFLUENCE OF SYPHILIS IN PREGNANT WOMEN, UNDER VARIOUS MODES OF TREATMENT.—Dr. F. Weber, of St. Petersburg, has given the results of his observations in 129 pregnant women suffering from syphilis admitted into the Obuchow Hospital during the ten years 1863–73. Of these patients, 35 were treated only locally or not at all; 35 were submitted to treatment by inunction; in 23, inunction was combined with the external use of iodine (iodide of potassium with tincture of iodine); 19 were treated by the internal use of a combination of iodide of potassium and corrosive sublimate; and in 17 cases iodide of potassium was the only remedy used. He gives abundant statistical details, and sums up as follows: In general, the course of pregnancy was interrupted in 25, or 20 per cent. of the cases; this proportion, however, may be reduced, when it is remembered that of the patients four had erysipelas of the head, one recurrent fever, and one exanthematous typhus. 2. Every method of treatment which interferes with the digestive system predisposes to untimely birth. 3. In the cases submitted to simple local treatment, there were 20 per cent. of premature births; in three, however (suffering from typhus and recurrent fevers, and from extensive formation of abscesses), violent fever appears to have been in part the cause of the untimely labor. 4. In pregnant women who were treated by inunction together with local remedies, there was no disturbance of the course of pregnancy. This confirms Professor Sigmund's conjecture, that the inunction treatment has no injurious influence on the course of pregnancy. 5. In women in whom inunction was either accompanied or followed by the internal use of iodine, the percentage of premature births was 37; this, however, may be reduced to 20 by deducting two severe cases of erysipelas of the head. 6. General treatment with a solution of iodide of potassium and perchloride of mercury was attended by 15 per cent. of premature births. 7. In cases treated by iodide of potassium, 42 per cent. of untimely births occurred. 8. The injurious action of general treatment did not in any way correspond to its duration, but much rather to its effects on the digestive organs. Hence general treatment should be interrupted on the first indication of indigestion in a pregnant woman. 9. The period of pregnancy at which general treatment is commenced appears to have no influence on the occurrence of premature labor. 10. The stage of development of the syphilis seems to be not without influence on the occurrence of untimely birth. 11. The puerperal period ran an abnormal course in 4 out of 14 cases treated locally, in 3 out of 8 treated by inunction and iodine, in 3 out of 4 treated by iodine and sublimate (one of these patients died), and in 4 out of 10 treated by iodide of potassium.—*American Journal Medical Sciences.*

POISONING BY CHLORAL.—Dr. Chouppe records a case of this. He observes that chloral was scarcely introduced, when large doses came to be administered with apparent innocuity. Thus, M. Martineau related a case of cancer of the ear, in which, for the relief of intolerable pain, he administered the enormous quantity of sixteen grammes in two hours; while M. Bourdon stated that in puerperal convulsions he often gave ten to twelve grammes; and M. Mialhe declared that he considered it almost impossible to kill an animal by chloral given by the mouth.

The following case, however, shows that large doses may be attended with great danger. Dr. Chouppe was called at midnight of January 12 to a gentleman, who he found quite insensible, with stertorous breathing, a punctiform contracted pupil, irregular respiration, and a small, irregular pulse. The nature of the case was obscure until a bottle containing some remains of chloral was found. The patient's state became rapidly worse; the respiration became very slow, the pulse imperceptible at the wrist, and the movements of the heart scarcely audible, the trunk and limbs being covered with a cold and viscous sweat. By one o'clock all spontaneous respiration had ceased, and the heart could no longer be heard. Inductive electricity and artificial respiration had been resorted to, with little or no effect, when the reporter called to mind a case of poisoning by morphia, at New York, in which artificial respiration had been kept up for several hours by faradization of the diaphragm. One of the poles was passed over the track of the phrenic nerve, and the other over the insertions of the diaphragm, a thermometer placed in the rectum indicating a temperature of 30.20°C ., being the lowest observed during the progress of the case. The application was continued for thirty-five or forty minutes, at the end of which the patient respired spontaneously, although slowly and irregularly, while the radial pulse could be faintly felt, and the movements of the heart were rapid. The first sign of returning sensibility was a dilatation of the pupils during the passage of the current, this ceasing when the current was interrupted. Next followed some cries, and lastly a complete return of consciousness during the passage of the current, the patient then recognizing those around him. At three o'clock he fell into a calm sleep. His pulse was 80, strong, and regular; the respiration was regular and 20; and the rectal temperature rose to 37.4° . The sleep lasted until nine, the patient awaking reposed and unaware of what had occurred.

It seems the patient took the chloral for the first time because he slept badly; and the bottle whence he drank the solution was supposed to have contained from thirteen to fifteen grammes, of which he probably took a third. Very soon after he commenced feeling heavy, and undressed himself, after which time he recollected nothing.—*Med. Times and Gaz.*, Feb. 12, from *Gaz. Hebdomadaire*, Feb. 5, 1875.—*American Journal Med. Sciences*.

Editorial.

Volume Fifteen.

With this number we commence the fifteenth volume of the BUFFALO MEDICAL AND SURGICAL JOURNAL, and we have again to thank our friends for the generous support which their valuable contributions have given us. It has been our aim to make the contents of the JOURNAL as full of practical interest as possible, and with this view we have used as much care as possible, both in the original department and in our selections from exchanges. In the coming volume we shall endeavor, under the head of *Medical Notes*, to present our readers with a resumé of the recent literature in the various departments of the medical sciences. These notes will be arranged under the various heads of Anatomy and Physiology, Therapeutics, Surgery, Ophthalmology and Gynæcology, and will be under the supervision of different writers.

Dr. W. W. Miner has kindly consented to assume the department of Surgery, that of Obstetrics and Gynæcology will be conducted by the Junior Editor. Of the other departments we can not yet speak positively, but they will be filled in due time. We ask that our friends, both in the city and country, will send us contributions to our original department, they are daily making observations which should be recorded for the benefit of their fellow practitioners.

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Notice.

We have sent out our bills for our yearly subscriptions, and we take this opportunity to remind those of our subscribers yet in arrears. Changes have been made in the financial department of the JOURNAL, and we wish those who have not remitted would do so at once.

Remittances should be made by draft or postoffice order, or by registered letter. To save trouble, please make them payable to Dr. E. N. Brush. Direct all communications to No. 8 South Division street when intended for the JOURNAL. Dr. J. F. Miner's address is 978 Main street where private letters should be addressed. Some complaint has been made that the JOURNAL has failed to reach subscribers, we would thank any who do not receive their copies regularly to inform us, and shall be happy to furnish back numbers to those who have failed to receive them.

Books Reviewed

Cyclopædia of the Practice of Medicine. Edited by Dr. H. von Ziemssen. Vol. III. Chronic Infectious Diseases. American Translation Edited by Albert H. Buck, M. D. New York: Wm. Wood & Co., 1875.

The topics discussed in this volume are under three heads: Syphilis by Prof. Baumler, Infection by Animal Poison by Prof. Bollinger, and Diseases from Migratory Parasites by Prof. Heller.

Syphilis occupies nearly one-half of the work, and is an able resumé of the more recent and best views upon the subject. The author does not give credence to the stories of its American origin but places its birth place in Southern Europe in the latter part of the fifteenth century.

The history and geographical distribution of syphilis are considered somewhat in detail, occupying some twenty pages. The general features of the disease are summed up in a brief but concise manner, occupying five pages in their consideration. This is followed by a consideration of the various stages. The distinguishing features of the primary, secondary and tertiary stages are given as set forth by Ricord. The objections to these arbitrary divisions are that an investigation of the pathological anatomy of the disease reveals the fact that the classification of Ricord is neither correct anatomically nor chronologically. It has been shown by Virehow that the mild symptoms of hyperaemia and exudations, or the more severe one of destructive ulceration and tubercular deposits may occur at any stage of the disease, or may in fact accompany each other. Believing, however, that the distinctions of Ricord in a modified form presents many attractive features in a clinical point of view, the author, after a consideration of the pathological characteristics and therapeutical indications of the disease in its various stages, presents a classification of a similar nature. In this arrangement a fourth stage is presented that of *confirmed syphilitic marasmus*. The modifications and variety of form in these various stages the author says may be due to a difference in the original virus or the individual characteristics. To this latter view we are inclined to attach the most importance; the former is at least a matter of conjecture, while all practitioners have noticed that the individual constitution of the patient will modify the action of the poison. The various modes of conveying the poison, by kissing, by means of drinking cup, pipes, etc., in obstetrical cases, and in surgical operations, and by vaccination are well treated. In the matter of vaccination the weight of opinion seems to be that the virus is conveyed by the blood and not by the vaccine lymph, still it seems eminently proper to exercise great choice in the selection of vaccine virus. An interesting discussion occupying some twenty-three pages is upon the doctrines of Unity and Duality.

In his conclusion the author says with much truth, "In any given case the inquiry shou'd be: *Was there any syphilis in the infecting source?* The question of Unity and Duality have turned too much upon the characteristic appearance of the sore, and too little attention has been paid by many who are ever ready to discuss this point to the pathological conditions obtained under the two circumstances." We heartily agree with the author when he says that the theory of chancre and syphilis may be formulated under the following statement: "The chancre (soft chancre) is a local contagious affection which is inoculable upon the bearer, and upon others both healthy and syphilitic, to an almost unlimited extent. It is developed without incubation within twenty-four hours. Through resorption an irritation of the adjacent glands takes place, which has an acute inflammatory character, and usually leads to suppuration, *but is not followed by constitutional syphilis.* The description of the true syphilitic chancre which follows is full and true to nature, and the exceptional deviations which occur, and which have given rise to many disputes are well noted. The microscopic appearance of primary affections, the different processes in the various stages in the evolution of the disease, and the affections of the various parts are well described. Sections upon the diagnosis, prognosis and treatment of the disease close this portion of the work. They are in entire harmony with the balance of the section, that upon treatment we have noticed in an other portion of this JOURNAL, (page 21) and forbear dwelling further upon the subject.

Infection by animal poisons is an interesting section by Prof. Bollinger, who has given especial attention to the diseases of animals.

The various diseases, glanders, anthrax, hydrophobia and the foot-and mouth disease are considered first in the animal and then in man. A chapter upon infection from the bite or sting of poisonous insects or animals closes Prof. Bollinger's portion of the work. Though not so much practical interest as the preceding portion it is nevertheless full of instructive matter and forms a valuable portion of the work.

Diseases from migratory parasites receive attention from Prof. Heller. Under this head are considered echinococcus, cysticercus, cellulosa and trichinae. The latter of these subjects seems to be of the most general interest, and it as well as the other two subjects are well considered. The illustrations are well selected, and serve admirably to elucidate the text. As a whole, volume three serves well to maintain the expectations which the former two volumes called forth.

Clinical Lectures on Diseases of the Urinary Organs. Delivered at University College Hospital. By Sir Henry Thompson. Philadelphia: Henry C. Lea, 1875. F. Butler & Son, pp 195.

These lectures which have reached a third edition in England and a second in this country, comprise in a small space a vast amount of instruction.

The introductory chapter on Diagnosis is excellent, and should be read by every student of the diseases of the Urinary Organs. The advice given is terse and to the point, and if more frequently followed would prevent some of the unfortunate errors which occasionally occur in this line of practice.

The lectures are fourteen in number being an addition of two over the former edition. They consider stricture, the treatment of stricture, hypertrophy of the prostate, retention of urine, extravasation of urine and fistulæ, stone in the bladder, lithotritry, lithotomy, the early history of calculous disease, cystitis and prostatitis, diseases of the bladder, and hæmaturia and renal calculus. In the treatment of stricture dilatation is advised always in every case, where this will not succeed internal urethrotomy is advised, the author giving preference to the instrument of Civiale. He does not speak very highly of the method of overdistension or of the instrument invented by himself for this purpose. In relation to the early history of calculous disease he says: "A very simple rule, indeed, too simple, I think, is often adopted. When the urine has persistently and habitually thrown down acid deposits, and the patient has generally been prescribed alkalis; if on the contrary he has alkaline deposits, he has been treated with acids.

* * * * * You really have the same condition as that of the fabled ostrich, which is said to put its head in the bush when pursued by hunters, and, no longer seeing them, believes itself secure. Just such is the security of the patient with uric acid who trusts solely to alkalis or Vichy water. His surplus deposits have become imperceptible to *his* vision; nothing more." The treatment advised by the author is such as will stimulate the excretory action by the primæ viæ without depressing the vital power. For this purpose the mineral waters containing the sulphates of soda and of magnesia in considerable proportion are recommended, and he finds that those of Friedrichshalle are the most desirable.

Were time and space to allow we should be pleased to speak of this work to an greater extent, but we can only add that the lectures are admirably adapted to the wants of those in search of information in this department of medicine.

On Functional Derangements of the Liver. Being the Croonian Lectures delivered at the Royal College of Physicians, in March, 1874. By Charles E. Murchison, M. D., LL. D., F. R.S. New York: Wm. Wood & Co., 1875. Buffalo: H. H. Otis. pp. XVI, 182.

The author says that these lectures do not pretend to place the subject upon a firm and lasting basis; but by calling attention to its importance and provoking discussion, it is hoped that they will prove a stepping-stone to a

more certain knowledge of it, and in the mean time that they will help to supply what appears to be a deficiency in medical literature. The opening lecture gives a sketch of the present knowledge of the physiology of the liver, which is an excellent resumé of the subject which shows a wide range of reading and a thorough acquaintance with the subject. Following this is a classification of the functional derangements of that organ. This classification is based upon the normal functions of the gland and upon the symptoms which a disordered liver may produce in the different physiological systems of the body. The derangements are classed under nine separate heads, viz:—abnormal nutrition, elimination and disintegration; derangements of the organs of digestion, of the nervous system, of the organs of circulation, of respiration and of the urinary organs, and abnormal conditions of the skin.

The discussion of these different subjects are of more than usual interest, and show the work of a thorough student.

In view of what has been said in the notice of the work by Sir Henry Thompson in this issue upon the agency of functional derangements of the liver in the production of urinary deposits, the remarks of Dr. Murchison upon abnormal disintegration are of especial interest. The author prefers in designating an excess of uric acid and of the urates to employ the term lithæmia in preference to uricæmia as proposed by Dr. Austin Flint.

Dr. Murchison is particularly emphatic in saying that this condition of lithæmia is not due to a derangement of the function of the kidneys but rather of the liver, of a more or less temporary character. Among the effects of the abnormal disintegration, are mentioned urinary and biliary calculi, gout, degeneration of the tissues and the derangements of the liver, which are named next in order in his classification.

The volume is closed with a consideration of the causes and treatment of derangements of the liver. Dr. Murchison has succeeded admirably in placing this subject before the profession in an instructive and suggestive form. It will doubtless be the means of stimulating others to investigation and study in this comparatively unknown region, and we hope that the author, encouraged by the success of this effort, will give to the profession the result of this studies in a still more comprehensive form. The book is printed on tinted paper in clear type and handsomely bound. No student or practitioner of medicine should be without a clear understanding of its contents.

Sex in Industry; a Plea for the Working Girl. By Azel Ames, Jr., M. D. Boston: J. R. Osgood & Co., 1875; pp. 158.

The interest awakened in the behalf of the female population and their relations to the various modes of education, by Dr. Clarke, has developed itself in various ways. Taking Dr. Clarke's "Sex in Education as his

model, Dr. Ames has endeavored to make a similar plea for the female sex compelled to follow the various industrial pursuits.

In education the question propounded by Dr. Clarke, is not *shall* woman learn the alphabet, but *how* shall she learn it, and in view of the same physiological facts Dr. Ames asks, what shall woman do and what not do, and how shall she least harmfully do that which she may undertake: More than ten per cent. of the working women of the United States are under fifteen years of age. These in the aggregate are something over 191,000 as shown by the United States Census of 1870. Dr. Ames says that the condition of these females is far worse than that of the student, for the reason that the method of study has only to be changed to produce the desired reform, while with the operative in any branch it often happens that the character of the work as well as the method is wrong.

Of the large number of girl-workers under fifteen, it is highly probable that a large percent. have not established their menstrual periods. Dr Clarke in speaking of this subject says:—A careless management of this function, at any period of life during its existence, is apt to be followed by consequences that may be serious; but a neglect of it during the epoch of development, that is, from the age of fourteen to eighteen or twenty, not only produces great evil at the time of neglect, but leaves a large legacy of evil to the future." In pointing out the evil effects of constrained position, muscular effort and brain work, the same author says that the female operative suffers less from these influences than the student for the reasons:—1st. The female operative as a rule has passed through the critical epoch of a woman's life. 2d. She has less brain work than the student.

In answer to the first of these statements, Dr. Ames quotes the statistics given above. It is also obvious that in the intricacy of the modern machinery employed and the many mental processes demanded in certain employments, demands a large share of brain work, less, no doubt in the aggregate than put forth by the student, but still of considerable importance. "Again," Dr. Ames says:—"There are conditions connected with the acts of cerebration in the operative that in and of themselves are potent for evil; as, the monotony, depression, bodily fatigue, and "constrained position," few of which find their counterparts in ordinary student toil."

Dr. Beard says; Brain-workers live under better sanitary conditions than muscle-workers. Brain-workers can adapt their labor to their moods and hours, and periods of greatest capacity better than muscle-workers." Death rate tables of the three classes, gentry, tradesmen and operatives, give surprising results against the operatives both in longevity and youthful deaths.

The loss to the State by the sickness or death of the operative is a direct loss of income. "If by indiscretions of educational methods the young female sacrifices life or health, the loss, though great, is but that, so far as the state is concerned, of an unproductive unit." With the working girl the

Commonwealth loses her labor, and herself as a unit in the maintenance of society. The student may have given promise of a life of usefulness, the worker has already begun it.

The author gives a tabular view of the loss, first to the individual, and then the state, produced by any form of occupation which hinders female health and developement. The errors of employment that produce these results are first, the early age at which girls are put to work, second, working them too many hours at regular and prolonged tasks, third, their employment at tasks which cannot be undertaken without injury, except by fully developed women; fourth, allowing no rest when their physical conditions demand it, i. e. during the menstrual period.

The employment of girls and young women is shown to be of too great duration, and requiring too close attention, and frequently attended by bad hygienic surroundings.

The writer glances at the more important and ordinary occupations in which females are employed, and gives numerous illustrations of the bad results arising from the employment of young females. He says that there are but two ways in which evils of this nature are to be met. "They are the diffusion of sound intelligence bearing thereon, and the enactment and enforcement of efficient repressing laws."

A few suggestions as to further enactments in this regard, and remarks upon the position of the working woman, close a volume, which, though small, is full of suggestive material, presented in an admirable manner.

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Books and Pamphlets Received.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. von Ziemssen. Vol. X. Diseases of the Female Sexual Organs. By Prof. Carl Schröder, of Erlangen. American Translation. Edited by Albert H. Buck, M. D. New York: Wm. Wood & Co., 1875.

Plain Directions for the Care of the Sick, and Receipts for Sick People. Plain Directions for Accidents, Emergencies and Poisons.

First Annual Report of the St. Catherine's Training School, and Nurses' Home, in Connection with the General and Marine Hospital.

Fourth Annual Announcement of the College of Medicine of Syracuse University, Syracuse, N. Y.

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ART. I.—*The Cornea in Health and Disease.* By F. W. ABBOTT, M. D. Read at the Buffalo Medical Association, Sept. 7, 1875.

We read, in ancient story, of two valiant knights who approached a suspended shield from opposite sides, and as one said that it was of silver, while the other knew that it was golden, their knightly honor considered this question of veracity capable of no other solution than the appeal to arms. When both lay prostrate on the field with life ebbing, the shield was reversed, and each saw that the other was right, from his point of view.

Many a battle long and fierce has been fought since that day, by contestants too eager for frays to essay a look at the other side of the shield before spurring upon their adversaries.

If we seem, in considering our subject to-night, to ignore the views of some of our friends who always stand upon evolutionary ground, let them not say that in ascribing an exquisite adaptation of means to an end to a beneficent creator, we enter the lists against any one. It is only that our attention is so absorbed by the perfections of the golden side, that we have no place left for thought or care for any baser obverse.

Presupposing the existence of the other parts of the eye, its

nerve, refracting media, and tunics, let us look for a moment at some of the indications to be fulfilled in supplying its anterior segment; and then consider how these indications are met.

It is evident, in the first place, that it must be perfectly transparent, to allow the rays of light to pass unimpeded to the sensitive retina; and the index of refraction of all its component parts must be the same, that these rays be not distorted or turned out of their way. It must be of sufficient consistence to preserve its shape perfectly, in spite of the intraocular pressure, or any ordinary force which may act upon it externally. Its nutrition must be so provided for that it may heal rapidly after an injury, and resist the onset of disease. And it must be kept perfectly clean, lest any adhering impurity impair its perfect transparency. None of the tissues of the body as they appear in other places, fulfill these conditions, but they are met so completely by an adaptation of tissues and processes occurring elsewhere, that we gladly recognize a Supreme hand working in the whole body with unity of purpose for the needs and happiness of its immortal occupant.

In examining the structure of the cornea, we find that it is composed broadly of four layers: 1st. The external epithelium. 2d. The true corneal tissue. 3d. The membrane of Descemet. 4th. The internal epithelium.

The external epithelium is laminated, flat epithelium, in the adult 0.03 mm. in thickness.

The membrane of Descemet is a transparent, structureless membrane, 0.006–0.008 mm. thick in the center, and 0.01–0.012 mm. at the border.

The internal epithelial layer is a simple layer of flattened cells lying on the membrane of Descemet, called the endothelium of the membrane of Descemet. These three layers present no points of particular interest.

The true corneal layer is about 1 mm. in thickness at the edges, and a little thinner in the center. It is built up of lamellae, which lie parallel with its surface, and are composed of broad thin layers of very delicate fibrillae. Between these lamellae are interspaces, which anastomose with each other and have received different names, according to the varying views of their nature entertained

by different anatomists. They consist of flat, nucleated cells, without a cell membrane, lying for the most part parallel with the surface of the cornea. These corneal corpuscles have numerous processes which pass off from them in every direction, and unite to form a cellular network, traversing the entire cornea.

By this arrangement of the corneal elements, we see how perfectly the indications as to consistence and nutrition are fulfilled. The tough connective tissue fibrillae giving sufficient firmness, and the cellular network affording a supply of nutrition to every part. The transparency and optical homogeneity are provided for by making the fibrillae transparent, and glueing them together by a cement, and filling the corpuscles with a protoplasmic substance which possess the same index of refraction as the true corneal tissue. This cellular network is far too fine in health to permit the passage of the blood globules, but in disease we see the delicate tubes rapidly enlarging until, as practical blood vessels, they carry the rich red flood to battle against the corroding ulcer which threatens destruction, and fill it up again with firm, unyielding tissue.

The sensitiveness of the cornea is ensured by a plexus of nerve fibres which lose their medullary sheath near its margin, and so penetrate its substance without rendering it opaque. When any speck alights upon its surface these alert sentinels send the alarm to lid and lachrymal gland, who with brush and water so quickly sweep away the intruder that the tenacious retina, holding its impression for an instant, is entirely unconscious of any obstruction to its vision.

Notwithstanding all these means so beneficently applied for its nutrition and preservation, the cornea is not exempt from the ills and accidents of other organisms, and we will look for a few minutes at some of these, and the means for their relief.

The transparence of the cornea renders its disorders peculiarly interesting to the observer, for here he may see the rise and progress of disease which elsewhere is hidden from sight, and he may recognize at once conditions which in other places would be revealed only by results. This exposure to observation is doubly precious here, where the loss of a few atoms of tissue more or less, which anywhere else would be a matter of no moment, may make the difference

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between a life of hopeless darkness and the priceless blessing of sight.

Perhaps the most common of the uncomplicated affections of the cornea is Phlyctenular keratitis or Herpes corneae. This appears as a circumscribed, rounded, cloudy nodule or point of inflammation in the anterior layers of the cornea, with the subjective symptoms of lachrymation, photophobia, and ciliary neuralgia. This nodule may pass away by resolution and leave no sign, or it may be surmounted by a vesicle which quickly bursts, or the superficial layers may be thrown off, in either case leaving an ulcer.

The treatment of this affection is very simple when seen in its incipiency. The insufflation of a little levigated calomel, with the use of a mild solution of atropia usually suffices to affect a cure in a few days. Strong astringent or irritating applications are decidedly contra-indicated in this trouble, especially any form of nitrate of silver, which often prevents the resolution which we wish to obtain and changes the phlyctenula into an ulcer, of which we shall soon speak.

As I said one phlyctenula is easily treated, but how to prevent others from coming, and coming again and again, "Ay, there's the rub." I have found the exhibition of quinine to be more efficacious in breaking up this habit of recurrence than any other drug, but this must be aided by open air exercise, or a change of air, brine baths, excluding pork and pastry from the bill of fare, etc. This disease, called by some strumous ophthalmia, has not, in my hands, been at all benefitted by iodide of potassium and similar anti strumous remedies. In obstinate cases of recurring phlyctenulae where the lids tightly hug the eye-ball, recourse may be had to the operation of canthoplasty as recommended by Dr. Agnew in a recent article on "Canthoplasty as a remedy in certain diseases of the eye."

Ulcers of the cornea, from their frequent occurrence, come under the observation of every physician, and as their results are often lamentable, they claim a prominent place among corneal troubles. These are of all grades of severity. Sometimes they appear as minute excavations which escape the patients notice, the photophobia and lachrymation being ascribed to a "cold in the eye"

until, the danger and suffering being at an end, the minute nebula of new tissue brings him, in great alarm, to the physician on account of a film which is growing over the sight. Sometimes we see the broad perforating ulcer, which leaves in its train a bulging staphyloma of the iris, which causes hideous deformity, blindness, and even the loss of the whole eyeball.

This is not the occasion for a detailed description of the manifold phases of corneal ulceration. I will only speak of some of the means at our command for their relief, and the amelioration of some resulting deformities.

The rationale of the treatment in an ulcer on the cornea differs from that for treating a similar condition in any other part of the body. Elsewhere we try to heal an ulcer as quickly as possible; here we are concerned not only with its healing, but how it heals, for we find that if the new tissue is deposited slowly it is much more likely to be transparent than when it fills up rapidly. So we try to check the ulcerative process as soon as possible, and then to guide the nutrition so that the edification may be slow and gradual, but constant.

In small ulcers unaccompanied by much irritation a gentle stimulant is required, and for this I employ the insufflation of calomel more often than any other remedy. This causes so little pain that the most sensitive child seldom resists its second application. It should not be employed, however, together with the internal use of pot. iodidi, as they occasionally form a very irritating compound in the eye. A collyrium of atropia sulph. is indicated in almost every case, to soothe the exposed nerve fibres, and by its action in decreasing the intraocular pressure to relieve the strain upon the weakened cornea, and thus lessen the danger of perforation. One caution should be observed in the use of atropia. Some druggists keep only the simple alkaloid, which is insoluble in pure water, and they make a solution by adding an acid which may prove irritating instead of soothing. The neutral sulphate which dissolves perfectly in water is always preferable. If the subjective symptoms of photophobia and ciliary neuralgia are intense, much benefit is often derived from painting the brow with tr. iodine, in which morphine has been dissolved in the proportion of from 10 to 20 grs. to the

ounce. Some years ago I learned from Dr. Rochester that the excessive photophobia which we sometimes meet with in this disease, may often be so relieved by the inhalation of chloroform, that after the anesthesia has passed off the eye remains much less sensitive to light than before.

Here also the practice of touching the ulcer with a pointed stick of nitrate of silver, or a brush dipped in a strong solution of this salt is not only cruel, on account of the useless pain which it inflicts, but often detrimental in destroying the thin protecting layer of epithelium which, in the regeneration of the lost tissue, is thrown over the walls and floor of the cavity. Another remedy to be avoided is acetate of lead, which often leaves an ineradicable white deposit at the site of the ulcer.

When an ulcer does not yield to mild remedies a paracentesis of the cornea should be performed without delay. This is easily done by using a broad needle and puncturing the cornea near its border. Upon slightly rotating it the aqueous humor escapes, and although it collects again in a few hours, the temporary relief from strain often permits the floor of the ulcer to gain sufficient strength to resist the pressure when the aqueous collects again. This little operation is unfortunately contra-indicated in cases complicated with blennorrhœa of the lids, as then the edges of the wound may become infected.

In sluggish, sloughing ulcers, recourse may be had to hot compresses, to promote the flow of blood to the part, but their use is attended by so much danger that they never should be left to the nurse, but should be applied and the effect watched by the attending surgeon. When there is much conjunctival inflammation and the nutrition of the cornea is strangulated by the swelling, cold applications may be made, but these, too, must be carefully watched, lest they decrease too much the vitality of the already enfeebled cornea.

In spite of all our care a corneal ulcer sometimes heals only at the expense of a leucoma of greater or less density, and these, especially when central, interfere so much with the vision and cause such deformity that their treatment becomes a matter of great importance. In leucomata which are not very large and

dense the probabilities are that they are composed of true corneal tissue, but so irregularly deposited as not to be transparent. In these cases the object of treatment should be to keep up such a degree of irritation in the eye as will promote tissue change without causing inflammation. To accomplish this it is better to begin with mild applications, as calomel, and proceed to more irritating ones, as quinine, the amorphous yellow suboxide of mercury in some mild unguent, etc. This last preparation I have found of much service in such cases, and commonly use cosmoline as a vehicle, beginning with $\mathcal{R}$ Hydrarg subox. flav. grs. iii, cosmoline $\mathcal{Z}$ ii., increasing the strength *pro re nata*. Of this a portion as large as a grain of rice should be applied every other day.

As this preparation of mercury is not officinal, although mentioned in the last Dispensatory, a little care must be taken in prescribing it. A very competent druggist, who never had happened to see it, substituted turpeth mineral for it in one of my prescriptions a while ago, and the consequences were not pleasant.

A few years ago, in a memoir to the French Academy, M. De Luca gave glowing accounts of the effect of finely powdered suphate of soda in dissolving corneal opacities, but I think that, in the hands of American practitioners at least, it has been found to be of no more service than other applications.

Sometimes, unfortunately, we see as the result of an ulcer a dense, white cicatrix covering the pupil, and perhaps occupying the greater part of the cornea, as imperishable as any other scar, causing total loss of sight and hideous deformity. When there is any clear cornea the well known operation of iridectomy may restore a good degree of sight.

To relieve the deformity caused by the covering of the black pupil with a dense white cicatrix, the device of tattooing the cornea has lately been followed, and the cosmetic effect of this operation is sometimes very happy. Dr. Scott, of Cleveland, told me of a case, a few days since, upon which he operated, where the patient, a young man, found it impossible to get a situation, his appearance was so repulsive. The operation was a complete success, and a few months afterward he called upon the Doctor and said that the operation had been worth hundreds of dollars to him, as now he

could get a situation without difficulty. Patients frequently come to us to have a "pearl" taken off from the eye, who care scarcely anything about the loss of sight in one eye, as they suffer very little inconvenience from that, but they are very much concerned about their appearance, and will undergo much to be relieved from this blemish. The idea of the operation is very simple. It consists in transforming a dense glistening white surface into a black one by pricking in India ink. Several forms of needles have been constructed for this purpose, one of the most ingenious of which was devised by my friend Dr. Howe, but as it is not yet in the market I have never used it. I use Agnew's instrument, which consists of five fine needles arranged in a row, the line of whose points forms a concave arc corresponding with the convexity of the cornea.

Each surgeon differs from his fellows in the details of this operation, and one cannot treat all cases alike, so as a specimen I will tell you how the patient whom I show you this evening was operated on.

As she has very good courage I did not give chloroform. The tears will start, although the corneal cicatrix is not as sensitive as the normal cornea, so I had her sit upright in order that the tears might flow out below the scar and not dilute the ink. Standing behind the patient, I held her head firmly against the high chair-back, with my left hand on her forehead, and lifted the upper lid with the index. As the eye naturally rolls up when the cornea is touched this left the leucoma exposed without holding the lower lid. I then dipped the needle into a thick paste of India ink, and with it thus charged made a few punctures through the epithelial layer into the substance of the cornea. After holding the lid a moment to give the ink time to settle into the punctures I let it fall and allowed the eye to rest a few minutes. This process was repeated a few times and the patient dismissed, with directions to use water dressings if much irritation should ensue. This patient has had four sittings, and as after the last one, which was at five o'clock Saturday afternoon, she prepared supper for a family of 18 persons and has done her work every day since, you can judge the amount of inflammation which the operation sets up. Some sur-

geons prefer to perform the whole operation at one sitting, but I think the ink is more likely to wash out when the whole surface is lacerated at once, and prefer to take even half a dozen sittings since the irritation following is less than that caused by a smart application of the time-honored blue-stone. This operation should not be performed until some months have elapsed since the healing of the ulcer, and the cicatrix has become dense and firm. If any irritability remains, and the eye easily becomes sensitive and inflamed, or if the cicatrix is weak and thin, the operation should be delayed until these conditions are relieved.

There are several other affections of the cornea which, by their importance, seem to demand some attention, but I fear I have already wearied you, and will close by bringing in two or three patients to illustrate some of the points taken.

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ART. II.—*Abstract of the Proceedings of the Buffalo Medical Association.* Aug. 3d and Sept. 7th. Reported by E. N. Brush, M. D., Secretary.

The President, Dr. Gould in the chair.

Members present—Drs. Gould, White, Fowler, Howe, Boysen, Brecht, Brush, Hebenstreit, and by invitation Dr. Shannon, U. S. A.

The minutes of the previous meeting were read and approved. The application of Dr. M. B. Folwell for membership was received and under the rules laid upon the table for one month.

The application of Dr. Herman Mynter was taken from the table and he was unanimously elected a member.

Dr. Lucien Howe presented the eye of a man, who, on the 3d day of July received a wound on the cornea of the left eye extending into the sclerotic for one fourth of an inch. The wound opened into and evaporated the anterior chamber. When first seen, on the tenth, the lens was pressed into the wound pushing the iris before it. From the tenth until the thirteenth the patient did well; the wound in the sclerotic was healed, and that in the cornea nearly so. From this time, however, pain and tenderness

began to manifest themselves, and on the twenty-ninth the condition was so bad that enucleation was found necessary in order to preserve the uninjured eye. The case was a good illustration of the danger attending wounds in the ciliary region. In the specimen presented the cornea was infiltrated with pus. Over the anterior portion of the iris a deposit had formed of a serous character. The lens had become broken up and absorbed. The choroid and sclerotic were inflated with blood, the vitreous filled with a flocculent deposit. The stump, in this case, healed nicely, and on the ninth day after the operation the man resumed his work.

Dr. White related a case of atresia of the vagina. He remarked that atresia was not an unfrequent occurrence, several cases having fallen under his observation from imperforate hymen and other causes; but occlusion following, and the result of labor, was of rare occurrence.

The patient was confined in 1873, considerable *post partum* hemorrhage occurring, a cotton plug was pushed into the vagina, saturated with acetic acid. Convalescence was tardy. At the end of several months a menstrual molimen appeared, but was not accompanied by any flow. Several physicians saw the case, but the cause was not suspected. At last, upon making a vaginal examination, Dr. Griffin, of North East, discovered the occlusion and made an effort in which he partially succeeded, separating the vulva, but finding complete occlusion of the vagina at its middle. When Dr. White first examined the patient, he found the vagina firmly closed by what appeared to be a firmly organized diaphragm. A finger introduced into the rectum could detect a tumor above the obstruction, which presented some obstruction to defecation. The tumor was thoroughly distended and evidently contained fluid.

The patient having been placed under the influence of Ether by Dr. Rochester, Dr. White proceeded to open up the passage, the operation being made with as little cutting as possible. As soon as an opening was made about three pints of thick, tarry substance escaped, the retained menstrual fluid. A dilator was introduced and in three weeks the patient returned to her home well.

This case was mentioned on account of its rarity. Whether

the adhesion of the parts was due to the application of the acetic acid or to the long continued pressure of the head could not be stated. He had heretofore related in this association two or three similar cases. One in which the occlusion was relieved seven years after its production. In this case the os uteri was closed. In another case a patient of Dr. Potter, of Attica, after breaking down the occluding bands, the uterus was found in a condition of atrophy, it having become reduced to almost infantile size. The canal at the neck was almost closed and the neck so shortened that it could scarcely be distinguished. In the presence of Drs. Coventry, Moore and Eastman the uterine canal was incised and then dilated, and a galvanic pessary introduced to excite its function. In a few years the patient gave birth to a boy, thus illustrating the complete restoration of the uterine function. Dr. White also reported that he had been recently making pretty free use of the Squibb's solid extract of ergot, hypodermically, and also of a German preparation of Ergotine, in uterine fibroids. Of course pediculated intra-uterine fibroids could be removed by other means, but in intra-mural and sub-mucous fibroids the employment of ergot, as indicated, would produce uterine contractions and thus arrest the growth, if not cause its entire absorption. The use of ergot in sub-peritoneal or extra-uterine fibroids he did not think would be attended by any benefit. At the meeting of the American Medical Association in Louisville, Dr. Byford read a paper on this subject, and reported several successful cases. Dr. White had also used Ergotine in these cases by suppository, passing into the rectum five to ten grains every night, the solid extract and also the ergotine being employed. In a patient now under treatment it had been tried in several ways, but the administration, per rectum, was the only method in which it could be tolerated. He gave preference to the Squibb's solid extract.

On motion the Association adjourned.

SEPT. 7TH.—The President, Dr. Gould, in the Chair. Present—Drs. White, Rochester, J. F. Miner, W. W. Miner, Samo, Bartlett, Brecht, Fowler, Strong, Howe, Abbott, Mynter, L. F. Harvey, Hopkins, Brush and Wetmore, and by invitation, Dr. Shannon, U. S. A.

The minutes of the previous meeting were read and approved.

The application of Dr. L. H. Long, for membership was received and under the rules was laid upon the table for one month. The application of Dr. M. B. Folwell was taken from the table and he was unanimously elected a member.

The Secretary reported the Constitution and By-Laws printed and ready for distribution.

Dr. F. W. Abbott read an essay upon the *Cornea in Health and Disease* (see page 41). At the conclusion of the essay he presented three patients, who illustrated points taken in his paper. The first was the case of tattooing, described in the paper. The color of the opacity was seen to be wholly obliterated by the operation. The other two were illustrations of ulcer of the cornea, almost wholly healed without opacity, and of extensive lucoma.

Dr. Howe moved that the thanks of the Association be extended to Dr. Abbott.

Dr. White said that in arising to second the motion, he wished to make a few remarks, which, though foreign to the subject under consideration, were suggested by the paper. He had reference to the pursuit of special departments of practice by members of the medical profession. While he was heartily in favor of special work by those who were by study and observation adapted to its pursuit, he wished to make the assertion that the ground work of special practice should be laid in the broad field of general medical education and practice, that no man could be a good specialist who had not first been a general practitioner. There was but one practical point in the paper to which he wished to refer, that was concerning the application of nitrate of silver. It had been a professional life-long practice with him to use it in diseases of the conjunctiva and cornea. From this paper he had learned that it is not only desirable to heal the ulcer, but it is desirable to do so in a particular manner. He had not given much attention to this subject, having been in the habit, when possible, of referring this class of patients to others. The large attendance at the meeting illustrated the value of having designated essays or subjects for discussion, as it added interest to the meetings and drew out

members. The younger members should not hesitate to present papers for discussion or comment.

The motion of Dr. Howe was carried.

Dr. Bartlett asked if any benefit was derived from counter-irritation.

Dr. Abbott replied that in recurrent phlyctenulæ, authors recommended the seton or blister, but he had not been in the habit of using them and could not speak from his own observation.

Dr. Strong said that early in his practice he had used, with benefit, nitrate of silver, applied to the lids externally and would ask if it was now employed.

Dr. Howe remarked that Bowman and Crichtett, and also Lawson employed counter-irritation in the form of setons and blisters with benefit in intractable cases.

In tattooing, which was attracting considerable attention, the great objection was the want of a proper instrument. In one case which came under his notice, a good operator in Guy's Hospital, punctured the cornea for this reason.

Dr. Miner said he had a theoretical, but no practical knowledge of tattooing, but from his knowledge of surgical procedures, he was of the opinion that the more simple the instrument employed in the operation the better, providing it be used with care. He could see no reason why India Ink could not be used to color the new tissue constituting opacity of the cornea as readily as it could be used in making images upon the arm of the sailor. He hoped the instrument used would be a simple needle so that the point could be constantly under the eye of the operator. As to counter-irritation in inflammatory diseases of the globe of the eye, he could see no good reason why such practice should be any longer continued. Thirty years ago it was his opportunity to attend the New York Eye Infirmary. Cupping and leeching were then in fashion. It was customary to arrange twenty or thirty poor, half fed, half clothed victims in a row, and two days in a week apply cups to the temples. The dark room, torch light of a wick dipped in alcohol and lighted, the slight of hand operation by which a spring lancet and a cup were applied to the temple, sometimes on both sides, forcibly reminded one of Satan, superintending the In-

fernal Regions. It was there observed that the same patients appeared from week to week. He was happy to say the practice had long since been abandoned. Not only in the New York Infirmary, but everywhere, in good treatment of the inflammatory affections having their seat mainly on the conjunctival covering of the eye.

Dr. Bartlett said that while he had no doubt but that Dr. Miner was strong in his convictions in regard to counter-irritation, he had noticed cases in which the improvement could be attributed to the application of a blister back of the ear or on the temple.

Dr. Abbott said that he had neglected to speak of the necessity of administering chloroform in some cases to children, in order to get a perfect examination of the eye. He had noticed, in these cases, that after the administration of the anæsthetic, the photophobia was sometimes less intense.

Dr. Strong moved that Dr. Bartlett be invited to read an essay at the next meeting on Ozone. Seconded by Dr. Hopkins, and carried.

On motion the Association adjourned.

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ART. III.—*The Influence of Medical Studies upon Religious Belief.* Read before the Cayuga County Medical Society. By Theodore Dimon, M. D., of Auburn, N. Y.

[Published by vote of the Society.]

The modern study of science tends towards infidelity in religion, and the profession of medicine is especially open to this charge. Dealing with the human body as a machine that we are called upon to study as a material existence, and to regulate its operations by material means, we are led to view all its conditions and manifestations as material results of organization, and to deny the existence of a soul, or of any separate individuality, having character, responsibility, or fate, unconnected with the body. Called upon, as our profession also is more than any other, to study the natural sciences and to employ in our investigations the mathematics and natural philosophy, and in our practice to rely upon fixed laws and the obtaining of material results, that we may prevent as long as possible our fellow beings from leaving this world's

life, there is this additional impulse towards materialism among us. The question arises whether such study and practice need to or should have this effect with us, and whether scientific pursuits generally should affect any of their followers in this way.

I use the term infidelity in religion only in its strict sense of want of faith. All religions call for faith or belief in something not capable of demonstration or proof, and some of them for faith in things which are capable of being proved to be absurd and untrue. In this point of view their very foundation support rests on a basis so different from that upon which all science rests, as to raise a hostile disposition between their respective followers when brought in collision. Save in one redeeming feature which runs through them all, all other religions save the Christian may be left to one side in treating this question. That one feature is the belief in a creating, governing being, or set of beings, to whom mankind is responsible.

I affirm that the tendency of the study of physical science ought to be to establish a belief in the existence of a creative power. Whether, having created, such power also governs, and if mankind is responsible to it for his conduct, are the further points upon which science and religion begin to diverge. That they should do so or need to do so, whether on the contrary they do not, each demand the other to make out any reasonable scheme of existence for creation or creating power or for God and His works, is the subject proposed to be considered in this paper.

In discussing it, it seems proper to say that we should avoid some positions which it is thought belong to the advocates on either side rather than to the subject itself. One of the most prominent of these is the making a science of Theology, when there can be confessedly no science, and indulging in the absurdity of appealing to reason in its support, and at the same time condemning all human reasoning on divine subjects as impious and sinful. The foundation of theology as a science was laid according to the Bible, at the very beginning of human existence, in the Garden of Eden, Satan being its professor and Eve the student, and the clear and unmistakable foundation of God's religion was then and there laid, in simple faith and obedience, as contra-distinguished from theo-

logic science. And the evil and fatal origin of theologic science has given character to its subsequent history, in all the wars, tortures and martyrdoms, in all the pride, vain glory and deceit it has produced. "And the Lord said unto Moses: make thee a fiery serpent and set it on a pole; and it shall come to pass that every one who is bitten when he looketh upon it shall live. And Moses made a serpent of brass and put it upon a pole." Now suppose that the Israelites had fallen to disputing and to torturing and burning one another at the stake as to whether that serpent on the pole simply consisted of brass, or was actually a living serpent, instead of looking to it in simple faith that it would save them; the story would then have furnished a good illustration of the distinction between theology and religion. Witness the history of the dogma of the real presence. A prominent position on the other side, taken by scientists, is one which seems equally untenable, and that is to require moral questions to stand on the same basis as physical questions, and to apply the rule *falsus in uno falsus in omnibus* to the former. The physicist cries out against revelation when he discovers a falsity in some purported statement of revelation, false in one thing false in all, while he knows and claims that to discover one error or falsity in science is but a step forward in the road of truth, and that *exceptio probat regulum*.

I have said that the tendency of the study of physical science ought to be to establish a belief in the existence of a creative power. It is not proposed to go into the proofs and evidences on this point, because it must be taken by all reasoning beings as self-evident. A thing made requires a maker. It did not make itself.

"What but God!
Inspiring God! who boundless spirit all,
And unremitting energy, pervades,
Adjusts, sustains, and agitates the whole.
He ceaseless works alone; and yet alone
Seems not to work; with such perfection framed
In this complex, stupendous frame of things.
But though concealed, to every purer eye
The informing author in his works appears."

But you ask who made the maker? The human mind *must* stop there. And because it must stop there, that must be received as an axiom. Physical science takes account only of things made,

and of their actions and reactions on each other, so far as our faculties and appliances will enable us to ascertain them. It is constantly studying laws and causes in nature, and as constantly, from the very nature of the human mind, it requires a first cause and law-giver. And the further the wonderful developments are followed, as in Astronomy, into boundless space, till the throbbing brain is ready to burst in the vain endeavor to grasp the whole, the more wonderful becomes the maker.

The contemplation of the designs, the beauties, the bounties of creation evince an intelligent and beneficent creator, and not a mere first cause; and here both science and religion may start in accord in asking the question, why have these things been created? And here to both comes, in the words of Castellar, "the mysterious idea of a personal God, from which descends inspiration upon the arts, light upon the sciences, the hope of immortality upon this short and fragile life." Science must, by the very necessity of the case, leave this question to be answered by religion, or it must remain without any answer at all. Science requires, however, the question to be put, because it has been all the while contemplating design in all the physical steps it has traced. An intelligent and beneficent creator being conceded, and the mere scientist, being obliged to stop here with his question of the why, is landed in a friendly and not hostile attitude by the side of the religionist, whom a necessity arising just as naturally and imperatively in his contemplations of human character, responsibility and destiny requires to ask the same question. Physics are a revelation to our senses; religion must be a revelation to the mind or soul, and on that account, of the character called miraculous. The basis of the one is fact, of the other faith; for on this latter basis alone can this momentous question be answered. Every part and parcel of physical science, every created, every existing thing, put these imperative questions to man. Why, so far as man is concerned, has all this been done? Why does he exist? What is his relation and duty to his creator? Mankind has endeavored to answer them of himself in vain. No process of reasoning, no mental or moral philosophy, no system of theology ever has or ever will answer them. All such efforts have been easily and successfully overthrown, leaving but blanks and

vacuums, but I don't know, between man and God. As said before in the history of all religions, all the truth and revelation there has been in them, and some of this has been in them all, has been faith in an intelligent and beneficent God, to whom man is accountable for his conduct, so far redeeming them all from the superstitions and errors, with which the devices and desires of our wayward nature has surrounded them. In physical science God has made a direct revelation to our physical senses; in morals has he left us without a revelation so imperatively necessary? To so believe, is to leave man, with character and accountability, floating in a sea of disappointments and uncertainties which would end in the insanity of atheism. A revelation, then, divine, direct, miraculous if you please, is it not then, not only a necessity, but a logical expectation—a revelation as much demanded by physical science as by man's moral and accountable nature. This revelation, as above stated, has so far as really made, been accorded to man always, and has been all the truth and reality and redeeming characteristics of all the religions man has had. God has never left man without a witness of himself. In the Bible, in the Christian religion, the dearest, the most direct, the most unmistakable, the only entirely divine revelation of true religion has been made. Let skepticism and science weed out of the Bible as much of error and absurdity as you please, there are none of them religion. The Bible does not reveal physical science, nor is it a history of events or processes; and no matter whether the weak and vain human agents who received and kept this revelation have surrounded it with their own added and unnecessary and obscuring statements and superstitions, as we know from its own testimony they were constantly doing, yet ever and ever the real divine revelation shines out only the brighter and clearer amidst all these. In Eden the simple faith and obedience due from man to God, and not the physical science of geology, was the revelation. But it is unaccountable, nevertheless, that anybody can read the sublime story of the creation, in which there is no revelation at all, and only find in it an occasion for criticizing the six days and six nights. All the way through the Old Testament and the New there is a plain clear stream of revelation of God's will to man, and of man's present and future relations to him,

while the accompanying history is made up of man's perversion of the spirit and design of the revelation, and of his constantly leaving the duty of simple faith and obedience for theological systems and plans and devices, and these so plainly at variance with the divine will were then, as now, made the grounds of attack against the authenticity of the revelation itself, while in fact they only the more show the necessity and make evident the proof of the true religion there revealed. I do not propose to preach a sermon, but rather to show that scientific pursuits, and particularly the study of our profession, should not have a tendency to induce skepticism on the subject of the Christian religion; and I will only add that its practice should have the very contrary effect. For how can we stand at the bedside of a dying human being and believe for a moment that that being, now existing with intellect to range the earth and the heavens, with emotions human and divine, with character and conscience, is in a few hours or minutes to become a mere disgusting mass of dead matter, and that the end?

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MISCELLANEOUS.

The Experiences of an Unsuccessful Practitioner.

To the Editor of the Medical Record:

DEAR SIR:—Davids are always singing the attractions of the medical profession and never lack an audience; Jeremiahs utter their lamentations in vain, and are of no account.

Nevertheless I have reason to think that Jeremiahs are by far the more numerous, and have a good deal on their side. As one of the Jeremiahs, therefore, I trust I may be allowed my growl, if only for fair play. If what I write savors of egotism, I here once for all make an humble apology; but egotistical or not, my only wish is to set down the facts of my case, now that I take my leave of medicine, for others' benefit.

About eleven years ago I commenced the study of medicine, immediately on graduating from one of the best literary colleges in the country.

After three years spent in hard study and faithful attendance on lectures, I took my degree at Bellevue Hospital Medical College; then I passed the examination and commenced my term of service

in the Hospital (Bellevue). On the expiration of my eighteen months I went abroad, and spent a year of hard work in Germany.

On my return I received the appointment to the surgical class of a large dispensary, and also opened an office in a thickly settled district near Washington Parade Ground.

I wrote several articles for the medical journals—indeed you published some of them—on which I was complimented by many of the older members of the profession. Then I joined different societies, and employed my ample leisure working at chemistry, and with the microscope, and in reading the journals. So you see, my education was much more extensive than that usually enjoyed by students.

I trust these details will be pardoned. I wish to show that the oft-repeated story of non-success from coquetting with your business, and allowing other concerns to take your time, was not the case in this instance.

This was all very well, and gave me great pleasure in the doing, for I was an enthusiast about medicine, and would have liked nothing better than to have pursued it for its own sake; but, unfortunately, the profession had been adopted by me as an ultimate dependence for necessary bread and butter. Now, my neat and elegant account books showed, at the end of the second year in city practice, just two entries, relating to two patients, from neither of whom had anything been collected.

I saw my capital dwindling, and resolved to make a move at once, as I could not afford to remain longer where I was.

My location was changed to a town beyond the immediate influences of the metropolis, nearly one hundred miles away from the city. It was a place of some four thousand inhabitants, many of whom were very well off, and as there were but three physicians there, I thought a fourth might find something to do.

Well, the first year I made \$500, barely enough to cover expenses for living, a horse and wagon being indispensable in a place where often I had to ride many miles. The work was hard; that I had bargained for, but the bane of the place was its "beat" element. Had half of those who consulted me paid, and most of them were fully able to do so, I would have done a stunning business; as it was, my \$400 just represented the payments of one-fifth of my patients, the remaining four-fifths being still my debtors.

The second year saw the \$400 of the first sink to \$100. The cause of this phenomenon is easily explained. One of the original, old-established doctors died, and as soon as the fact became known, a certain shrewd individual from New York made up his mind that he could not do a better thing than to come here and give himself out as the successor to the deceased doctor. Unfortunately for his calculations the same intention animated the minds of no less a number than five equally shrewd individuals, and Beeler's Quarters was plethoric with doctors. These new comers at first set

about to vindicate, each for himself, the title of being the only original Jacobs. But competition did not enliven trade, and at last things got so bad that each man of the six set up a private dispensary of his own, and quarreled with his neighbor over the few charity patients who ventured on availing themselves of the abundant provisions for medical relief. Finally poor people were induced to submit their ailments to one of the dispensary proprietors, who had the reputation of always prescribing tinctures, and as the opposition made use of fluid extracts the practice of the alcohol man grew apace. But the six soon tired of this business of competition and free dispensaries, medicine included, and then they banded themselves together into a mutual benefit and admiration society against an innocent though unappreciative community.

Since the spring floods from the medical colleges four newly-made graduates have added themselves to our number, they likewise having heard that there was a dead man's place to be filled, and supposing, in their ignorance, that they had found "an opening." I need not dilate on the effects of all this on my business. When I tell you that since the first of February, 1874, up to the present time, I have pocketed the magnificent sum of \$50 from my practice, I have reason to believe that I am ahead of some of my fellow unfortunates. This is not all. There have lately come here a rubbing doctor and his wife, who at once set every sick and imaginary sick person mad on the subject of their peculiar practice. Not only we, late comers, but the old and well-established physicians of the place have been made to suffer by the seductive pamphlet's influence. It is only the ignorant that patronize these people, who are a pair of as pestilent, vulgar, and ill-educated quacks as it has ever been my ill-fortune to meet, but the most prominent and intelligent minister of the place has sent his wife to be rubbed, and the valetudinarians of all the churches followed the lead.

When the man of greatest importance in the town is gained over by a discourse on the certain efficacy of expelling disease, as an entity, by rubbing and stimulating "the pores," what chance can a modest professional sign have as attraction, when placed in competition with a lively colored representation of a joyful ex-cripple throwing away his crutches at the touch of a long-haired individual near by.

To-day I say good-bye to the profession. It is greatly to my regret to be obliged to do it. Willingly would I wait the ten years which the gentlemen under whom I served at the hospital tell me will bring success, for my desire is, above all things, to remain in the ranks. But stern necessity knows no law of choice.

Nearly eleven years ago I commenced with a capital of eight thousand dollars, which I expected would pay for education and give me something to live on till my practice should be sufficient to bring me a living. The facts show that I have nearly consumed my capital, and am farther than ever from the chance of making a

living by medicine. I shall take the thousand or so I have left and try to get in some mercantile business, which, no matter what it may be, can hardly promise worse than the certain starvation if medicine be longer relied on. Fortunately I have only myself to consider; if I fail in a new undertaking no one will be dragged down with me. What is the secret of my non-success? It is not repulsiveness of person; it is not lack of decent manners; it is not extreme youth; it is not excessive age; it is not inattention or want of earnestness in such business as I have had; it is not the commission of some unfortunate mistake which has shaken people's confidence; it is not lack of proper technical education, yet even the hod-carrier makes more money than I, and I pay the girl in my kitchen a stipend far beyond the amount of my own receipts.

I recollect hearing a genial and popular professor once, giving his closing lecture to his class, say: "Gentlemen, a great many of you, over a hundred and a score, will be sent out from this school this year—many more from all the schools over the land—and besides, there is an absolute increase in the number of physicians; but we want all of you; this great and glorious country cannot have too many."

Then came something about "our glorious, our noble profession," which was applauded to the echo.

Now, I respectfully submit this is all wrong. Platitudes are very well, but when young men—farmers' sons and mechanics, stimulated by such misplaced eloquence, hold their familiar tools in contempt and make up their mind to become doctors, I emphatically declare that the man who urged them on has done a great wrong to the young men mentioned, to the community, and to the profession. If there is one thing more certain than another it is that this "great and growing country" does *not* want more doctors. I am no hand at statistics, but in Great Britain and Ireland I believe there is a population about as large as ours. There there are some twenty thousand doctors, yet from nowhere else is more complaint made of the overcrowded state of the profession. In our country, the last census, if I recollect rightly, made the number of medical men, of all schools, seventy-four thousand—one to every five hundred and forty persons. Considering the gigantic abuses to which medical charities in large cities are subject, and the many paying patients who select long-established physicians of great reputation as their advisers, how miserably minute a fraction of that five hundred and forty comes to each of the juniors.

It cannot be otherwise.

Now I should be the last man in the world to prevent anyone who really has a decided inclination and aptitude for medicine from qualifying himself to practice it; but that inclination ought to be founded on a better basis than the fancy pictures drawn by our professors. They are gentlemen usually—in the cities—in large and remunerative practice, and they must remember that everybody

cannot be as they by any amount of work. When every place is full, how are new-comers to be accommodated?

But even if a man know without doubt that medicine is his proper vocation, I warn him, by my example, not to try it if he looks to get his support therefrom. It is true that many a young man has the way made plain for his feet by doting relations and friends, who nurse the second Mott through adversities which would have swamped him unaided. Again, there are instances of blind luck, in which certain individuals stumble right into a certain success; but woe be to him who promises himself a certain leap at success on no other ground than that others have accomplished it before him. He will find the way blocked by scores of eager contestants, each bent on the one object, and which necessarily but one can obtain.

Another strange feature about the profession—a feature which distinguishes it from other learned callings and from trade—is, that money and brains, and time spent in perfecting one's self in medicine, give the man who has thus qualified himself no advantage in competition when seeking the patronage of a community. I was told by physicians of great reputation and first-class metropolitan practice, that by going through Bellevue, and studying awhile abroad, I would put, in a few years, thirty thousand dollars in my pocket. Perhaps that "few years" is not up yet; but certainly in five years the first thousand has not yet come to me. I wish to be distinctly understood as putting the incalculable and no-where-else-to-be-found advantages of hospital interne services on a higher level than that of a mere monetary investment, nor did I ever suppose that study at home or abroad would ever enable me to secure anything like the returns which flow into the coffers of a certain carpenter, turned quack, of whom I have knowledge. Nevertheless, there is certainly some excuse for the dissatisfaction of a man who, on the earnest recommendation of several veteran Æsculapians, reduced still farther his slender remaining means, that he might secure a thorough training for his work, and in five years after finds that the army of medical college graduates, whose whole education comprises the two courses of lectures, and reading with a preceptor (?), will seldom be behind, and in many instances is ahead of him. A well-meaning gentleman, who, until three years ago, handled the plow with adept hand, and, as he himself informed me, with great seeming satisfaction, "cudn't neither read ner write at thet time," has just put up his name, with the cabalistic M. D. after it, on the house next to mine. He showed me a diploma, certifying that J. M. had been granted the degree of doctor in medicine for numerous sufficient reasons, by the Faculty of the Medical Department of the University of Round-Holed Corners. The diploma was in Latin, such as Terence, or any *late* Latin author would have rejoiced to produce. J. M. confessed to me, under his breath, that his early education having been neglected—rather

superfluous information—he had never been able to learn just how much he did know. This I interpreted as a modest request to have the document translated. That I did; and though neither English or American was his language, but the beautiful pastoral dialect spoken in the Far-Down East, he seemed to understand. Thenceforth, whenever I passed his window, he was seen wrapped in ecstasy, gazing intently at the diploma as at an object of devotion, with a Latin dictionary which I had lent him in his hand. At last he mastered the words for himself, and rushing in to me, with the elegantly framed parchment in his hand, he pointed to it in triumph and said:

“Wall neow, I know all about it, an’ I’m a doctor neow, jes like yeow; ain’t I?”

This man is beating me all to pieces in practice.

“We wos both docteeers,” said a farmer, “an’ won docteer don’t kneow more’n another.”

I am aware that many will impute the causes of my non-success to myself, and will have it so, say what I may. But I cannot subscribe to their opinion, savor as my opposition will of self-sufficiency. The best proof that I am right is found in my knowledge of the career of no less than ten first-rate men, who likewise went through hospitals. I have been at the pains to consult these gentlemen, and, though my lucky brethren may find in the substantial agreement of the unsuccessful ones’ views a point for joking about misery loving company and foxes losing tails, I beg to suggest that these views are the product of a very bitter experience, and at least worthy of attention.

I would like to ask those favored gentlemen who lecture on the needs of this great and growing country for more doctors, if they were ever at a place within its limits where there was a deficiency of the article? “A deficiency of the good article.” Ah! very well; but is it not just this wholesale making of doctors by the medical schools and their professors which brings about this state of things? What would you have? Surely it is the interest of the schools to have as many students as possible, and the interest of each professor to graduate as many of his class as he can. One of the colleges in New York turned out a man as M. D. who, to my personal knowledge, could not tell the branches of the aortic arch, and whose examination in other departments than anatomy was proportionally brilliant. It is time some one should speak out, and as one who knows, I arraign our medical colleges as opening the ranks of the profession to a body of men who, as a class, are absurdly incapable, and, in consideration of the interests of life and death to be committed to their care, criminally incapable. I have known of the leading medical college of New York, some years since, graduating a man who never soiled his hands in the dissecting room, never touched a body, and whose reading comprised only that labor-saving machine, Neill and Smith’s Compendium; that is

he was never known to have any other medical work, and if he did, it was certain that N. and S. taught him all he knew. This man got a certificate of study from a doctor in whose office the student never entered, and systematically "cut" lectures. Of course this bogus doctor, as bogus as the possessor of any bought diploma, this "*virum probum*," had a brief career. Not at all. The time that other and more conscientious men gave to study, he gave to developing the qualities vulgarly known as "brass" and "cheek;" to influencing politicians successfully in his favor, and to drawing up "*Rules to be Observed during Treatment*;" and to-day his income is not less than ten thousand dollars yearly. Can we wonder that the community favors quacks? Nay, I have no hesitation in saying, and I say it boldly, that I would prefer at any time the services of an intelligent "quack" to such a "regular" doctor. I know that parallel cases exist in all the institutions in the great cities, and if this be the case there, what must be the depth of knowledge of the country school graduate, who is from a free school, from where the "professors" go out in the highways and hedges and compel students to come in?

The sublime trust with which some members of the profession speak of the general acceptance of a medical college degree as an educational guarantee is a patent instance of faith without works. What nonsense the professor utters, who says to the President, in the face of an admiring audience, smiling "graduates," and after music by the band, "These candidates have shown by their examinations," etc. A large proportion have shown great ignorance by their examinations; have copied stale text-books to construct that wonderful literary production, the "Thesis;" have given certificates of three years' study and of a moral character, from one whom they may have seen once in their lives, and have attended mythical lectures. How does the faculty know that candidates have attended two courses of lectures? The faculty is sure of one thing, and you may be sure of it. The candidates have shown, by handing over greenbacks, that they have *paid* for the lectures, which they may have never heard; for dissection, which they may have never prosecuted; and for graduation, which they are sure to get. I know this picture of a first-class medical college is not the received one. I only know it to be true. Why! you are requiring Spartan virtue of men when you expect them to stickle about how much a man knows, when he has paid for what he expects to get, and when "putting him through" is the condition of getting to more pay for similar easy graduation. There is no doubt of it. Our medical colleges are run with one great object in view—to make money for the professors, and the competition between them is fierce, not as to the quality, but the quantity of the material they turn out.

When I mention these facts to the nabobs of the profession, I do not find them denied, but it is usually said, "Oh! yes; but the inferior men drop off, and if a man really sets about to learn some-

thing for himself, he must distance the ordinary run of new graduates in a short time." For the reasons gone over I believe this view to be all fiction. It is useless to expect the laity to inquire whether a man has had hospital experience, and has studied abroad. If the absurd "ethics" of the profession permitted a man to tell people his qualifications in public print, it would be different. This exclusion from advertising I deem sufficient answer to those who contend that medicine is no worse than any other business or profession, law perhaps excepted. What earthly objection is there to advertising? "Honor, dignity of the profession," says the great and wealthy Dr. Blank. Of course, Dr. Blank, you don't need it; but how about us poor devils? What reason is there for my not letting people know I have had special opportunity to study eye diseases, or fractures, or what not? We stand by, and let charlatans reap all the benefit of this great means of success. But why let medical colleges advertise? DIPLOMA.

—*Medical Record.*

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URINARY RETENTION.—*Boston Medical and Surgical Journal*, May 13, reports the following method as commonly resorted to at the Boston City Hospital in primary treatment of urinary retention: A boy, fourteen years old fell, receiving a contusion of the hip; retention of urine followed, which could not be relieved; notwithstanding repeated attempts with the catheter, the bladder was distended to the umbilicus. Dr. Ingalls punctured the bladder above the pubes with the aspirator, and drew off three pints of alkaline urine, with slight pain, great relief, and no ether. The next day patient was catheterized, afterwards micturated with ease and was well. This course Dr. I. finds admirable, as the urethra rests and recovers from congestion, swelling, and tenderness. Generally one, two or three aspirations are required, relief certain, the pain slight, and the danger is nothing so far as is shown by the pretty large experience of this hospital. The operation may be repeated two or three times a day with safety.—*Charleston Medical Journal.*

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MEDICAL NOTES.

ART. I.—*Notes on Microscopy.* By GEO. E. BLACKHAM; M. D.

I. CONJOINED EPITHELIUM.—Prof. Martin, of Bristol (England) Medical School has an interesting paper on the subject in the *MICROSCOPICAL JOURNAL* for August in which he discusses the peculiar form of epithelial cell discovered by Schultze some twelve years ago and called by him *Stachel und Riff Zellen* (prickle and

ridge cells). These cells are covered or surrounded with spinous process, which appear to interlock with those of adjacent cells as the bristles of two brushes pressed together, or, as described by Mr. Stirling, of Edinburgh, like watch wheels. Prof. Martin combats the idea that these are really processes thrown out by the cells and terminating in free points or ends, and holds that they are in reality, continuous bands of formed material extending from cell to cell and the result of imperfect division of the formed material of the parent cells from which those thus united have been formed by fissiparous multiplication.

II. MICROSCOPICAL EXAMINATIONS OF THE PROCESS OF HEALING ULCERS BY TRANSPLANTATION OF SKIN.—M. Thiersch, having a patient whose leg had to be amputated in consequence of a large and incurable ulcer, thought it a good opportunity to examine the changes that took place when portions of skin are implanted on granulating surfaces. For three weeks previously, he accordingly transplanted portions of the skin day by day, the last being applied eighteen hours before amputation. The chief results were: 1. That adhesion occurs without the intervention of any immediate cementing substance. The adherent parts are in immediate application or are, at most, only separated by a couple of blood corpuscles. 2. The adhesion, when complete, takes place by means of the inosculation of vessels, which may be observed even eighteen hours after the act of transplantation of new skin. A connection is, at this period seen to occur by intercellular passages extending between the sharply contoured vessels of the skin on one hand, and those of the granulations on the other, and these intercellular passages become proper vessels in the course of a few days. 3. At the same time, the vessels of the skin beneath the transplanted portion undergo secondary changes; they become wide, irregularly dilated, with prominences on their walls, and in fact assume the characters of embryonal blood vessels. 4. True, new formation of vessels may take place when the primary inosculation fails. In such cases, the epidermis and the papillary bodies fall off after a little while, and the transplantation is believed to have failed; but this is not so, since the subcutaneous connective tissue with the remains of the sweat glands remains adherent.

After the lapse of some time new formed epidermis appears where the transplantation was made, which may perhaps be due to the germination of the remains of the sweat glands. Thiersch finally recommends a modification of Rererdin's plan, viz: that the surface of the wound to which the skin is about to be transplanted should have any granulations that may be found shaved off, and the new skin applied in the course of a few hours.—LONDON LANCET.

III. BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.—If there is anything in a name the proceedings of a body with so august a title as the above should be regarded with the deepest respect and the reports of their committees should be models of clear statements and wise conclusions. The report made in February last by Dr. J. Cheston Morris, "chairman of the committee appointed to examine optically the $\frac{1}{25}$ and $\frac{1}{50}$ objectives displayed at a late exhibition of the Section" does not, we regret to say, fulfill these indications as the following extract will show. The committee say: "The dependence of resolving power of upon angle of aperture is very well shown by placing a pleurosigma angulatum, for instance under a one fourth or *one tenth* with such an eyepiece as will amplify sufficiently, and *putting the compound body horizontally in front of a direct light. In this position no lines will be seen, but by rotating the compound body on its axis an oblique light is obtained, which at different angles according to the power of the objective, will bring out transverse or oblique lines, and finally dots appearing as hexagons.*" Then follows a table showing the angles at which the various markings appeared with different objectives. The committee concluded their report as follows: "From the observations noted above we deduce one very important fact, viz: That the different appearances of lines, dots, hexagons, &c. on the pleurosigma angulatum are not only the varied results of angle of aperture of amplification and of illumination, *but that they may be obtained with less and less obliquity of light as we increase the power of the objective;* thus making it evident that high powers with direct central light show us clearly things which we rather guessed at than saw (owing to increased chance of spherical and chromatic

aberration and distortion from the employment of oblique light) with lower ones. We would conclude therefore by recommending these high power lenses to those engaged in microscopic research, &c., &c."

In the above quotations from the report the italics are the writer's, not the committee's, and are intended to render prominent certain points which are so remarkable as to demand notice. In the first place, with a microscope "arranged horizontally in front of a direct light," oblique light can *not* be obtained "by rotating *the compound body on its axis*," because such rotation, even were it possible (and very few first-class instruments in this country are so constructed), would not change the relation between the light and the object. The committee probably meant that oblique light could be obtained by turning the *entire stand* so as to make the tube point more or less away from the light. Next, with the microscope arranged as directed by the committee, the writer saw *with direct central light* the hexagons of the *P. angulatum* with an immersion of 1-10 of 160² made for him by Wm. Wales, of Fort Lee, N J. The same result was obtained with the microscope in the upright position, and direct light reflected centrally from the plane mirror. The latter experiment was repeated with success with an immersion 1-10 of 135² without adjustment for cover recently sent me by Mr. Wales for examination. As the obliquity of light in these three experiments was *nil* and as the 1-10 showed with central light all there was to be seen, it does not appear that the results could have been *obtained with less and less obliquity of light by increasing the power to a 1-25 or 1-50*. The committee must have been unfortunate in their 1-10s or their manipulation, most probably the latter. No wonder that Dr. Hunt (a member of the committee) "wished it to be distinctly understood that he had nothing to do with the preparation of the report, and did not wish to be held responsible for the views advanced in it."

IV. ANGLE OF APERTURE.—The battle of the angles goes bravely on. Mr. Henry J. Slack, F. G. S., Sec'y R. M. S., has a long article in the London *Monthly Microscopical Journal* for May on "Angle of Aperture in Relation to Surface Markings and Ae-

curate Vision," in which he takes strong ground in favor of small angles, and speaks with somewhat effusive enthusiasm of certain German objectives made by Zeiss of Jena, a C ($=\frac{1}{4}$) of 48° and a D ($=1.6$ of 72° , which resolved the Pleurosigma Hippocampus with direct light from a clear sky, using a B eyepiece with the former and an A eyepiece with the latter. The advantages he claims for Zeiss' low angle lenses are, greater working distance and ease of manipulation and a resolving power equal to that of higher angled English lenses. In the August number of the same journal are letters from Mr. Henry Mayall, Jr, and Mr. Jabez Hogg, sharply criticising Mr. Slack's positions both as to fact and to theory, and Mr. A. F. Dod, of Memphis, claims that on comparison with low angled glasses by the best American, English, French and German makers, a Tolles' immersion 1.10 of 180° (?), (the highest possible angle,) beat the low angled lenses on their own ground. besides doing many things which they failed to do in the way of resolution.

ART. II.—*Notes on Obstetrics and Gynecology.* By E. N. BRUSH, M. D.

1. On the Relative Frequency of the Different Cranial Positions. By JOSEPH GRIFFITH SWAYNE, M. D. (*Obstetrical Journal of Great Britain and Ireland*, Sept, 1875.)

2. On the Means of Ascertaining the Length of Gestation, by Measuring the Fœtus and Gravid Uterus during the Second Period of Pregnancy. By VASSILY SUTUGIN, M. D., St. Petersburg (*Trans. Obstet. Society, Edinburgh*.)

3. The Diagnosis of Ovarian Cysts and the Indications for their Treatment. By DR. RHEINSTAEDTER, Cologne. (*Berliner Klinischer Wochenschrift*, May 31, 1875.

I. Dr. Swayne's paper is based on the observation of one thousand cases of cranial presentation. These observations were carefully made with a view of testing the accuracy of certain conclusions advanced in a paper read in 1852, on the "Varieties of Cranial Presentation." The conclusions made in 1852 were drawn from a record of 286 cranial presentations, of which 247 were of the first position, viz.: with the occiput towards the left acetabulum; 28 of the second, with the occiput towards the right acetabulum; 3 of the third, with the forehead toward the left acetabulum;

and 8 of the fourth, with the forehead toward the right acetabulum. These figures conflicted with the generally accepted views of British accoucheurs that the third was, next to the first, the most common position, and that the second was the most rare. This was the teaching of Naegle. Baudelocque and most French obstetricians held a different view, but Naegeli accounted for the discrepancy by supposing that cases which had been put down as of the second position had originally been of the third, but had altered during labor. The statistics of Swayne in 1852, and the researches of West, and Leishman, whose work on the "Mechanism of Parturition" is well known, led to a reconsideration of the teachings of Naegle, and a doubt as to their correctness arose in many minds.

The record of the 1,000 cases since observed by Dr. Swayne shows the following proportion:

First position.....	792
Second ".....	152
Third ".....	19
Fourth ".....	37
Total.....	1,000

This record bears out the deductions made from the previous cases as to the frequency of the different positions.

In reference to the change said to occur from the third to the second position the author says: In the 19 cases of the third position the presentation remained unaltered in 8. The presentation altered in 5 spontaneously, changing to the second. In the remaining six the position was changed by manipulation to the second.

The deductions made from these cases are the same as those arrived at in 1852, viz.: "that the second position is next in order of frequency to the first, and that the fourth occurs more often than the third." The author is also of the opinion that in the third and fourth positions the occipito-posterior position is more apt to remain throughout the labor than to change spontaneously.

II. It is impossible to make any abstract of this paper which would embrace all the points set forth in the author's scheme of

measurement. Following in the lead of Hecker Schroeder and Ahfield he has endeavored, by a series of observations upon the period of gestation as determined by the last catamenia, the corresponding size of the womb and the general development of the fœtus, to arrive at some approximate standard by which the length of gestation may be determined. In the course of the paper ten tables are given, the results of various measurements and weights made during the course of pregnancy and after delivery. Without entering into the details of these, we give the conclusions reached, hoping that our readers may have the opportunity of seeing the article entire. These deductions are:

1. The employment of the pelvimeter for measuring the height of the gravid uterus gives more trustworthy results than the use of the tape measure.

2. The upper border of the symphysis pubis is the most correct and unchangeable fixed point from which to measure the height of the fundus uteri, beginning at that point of pregnancy when the womb can be distinctly felt above the pubes.

3. The height of the fundus uteri above the pubes is a trustworthy objective symptom of the various periods of pregnancy in normal and in reducible oblique presentation, when the womb contains only one fœtus. In these cases it is necessary to note the presenting part of the fœtus and the size of the pelvis.

4. For plural pregnancies a different scale of measurement should be adopted.

5. In non-reducible oblique, and transverse presentations, the height of the womb cannot serve to indicate the period of pregnancy. In these cases the length of the fœtus, determined according to Ahfield's method, will serve to point out the corresponding height of the fundus uteri.

6. In slightly narrowed pelves the distance between the fundus uteri and symphysis pubis is almost equal to the height in breech presentations. In cases of greater pelvic contraction we have nothing to rely upon but the state of development of the fœtus as determined by Ahfield's method.

III. Dr. Rheinstædter summarizes his views as to the diagnosis of ovarian cysts as follows:

1. The presence of paralbumen does not at all prove the existence of hydrovarium.

2. From its absence we cannot argue with certainty the non-existence of cystic disease of the ovary.

3. There is great probability of a hydrovarium if we find paralbumen abundant, with a viscid condition of the fluid, like barley water, and with an abundant deposit of cellular detritus, and large round cells that are swollen or undergoing fatty degeneration.

4. The presence of well-formed, nucleated cells of cylindrical epithelium collected in groups or rows, speaks positively for hydrovarium, especially when this microscopic investigation agrees with the gross appearances and chemical constitution of the fluid.

In reference to treatment he says: A woman with a moderately large ovarian cyst which is stationary, should not be operated upon unless she urgently desires it. An expectant treatment should be adopted. Extirpation is indicated in rapidly growing cysts, also in suppuration of the cyst. He regards punctures of small cysts, firmly attached within the pelvis, through the vaginal walls, with drainage, favorably. Ovariectomy is sometimes indicated in pregnancy, and should be adopted in preference to abortion or premature delivery.

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Editorial.

Homeopathy in the Michigan University.

We copy from the *Detroit Review of Medicine and Pharmacy* the following correspondence, and also the extracts from the eighth annual meeting of the American Medical Association, giving Prof. Palmer's views upon the subject of Homeopathy in the University. The creation of a College of Homeopathic Medicine in the University, with but two Professors, the other chairs being filled by the Professors of Anatomy, Physiology, Surgery, Chemistry and Obstetrics in the regular college, has attracted much attention from outside parties who have watched the movements of the old Faculty with considerable interest. As a College of Medicine cannot be complete without the above-named chairs, and as

their lack is supplied by lectures in the regular college, it certainly seems that the members of the old faculty are also members of the Homeopathic school. The new rule by which the faculties of neither school sign the diplomas, excuses the old faculty from placing their sanction upon the homeopathic graduates, but as they are examined by the Professors of Anatomy, Physiology, Obstetrics, etc., it seems that this is somewhat after the manner of a mere technical dodge to avoid appearing to do what they really do. Withholding further comments, we append the letters and extracts :

ANN ARBOR, August 17, 1875.

Editors Detroit Review of Medicine and Pharmacy:

GENTS—Believing that the communication of Prof E. S. Dunster, in reply to the article in the *Medical Record*, in reference to the history and relation of homeopathy to the old school in the medical department of the University, contains some elements of error calculated to mislead the minds of your readers, I beg to submit another view, presenting what is believed to be a true exhibit of the degree of union or fusion of the faculties of the two colleges now established in the medical department.

The Board of Regents, in adopting the resolution "That a homeopathic college be established," of course implied that a definite curriculum of studies should be pursued to qualify the student for the honor of the degree of doctor of homeopathic medicine. The curriculum, it was also enacted, should be equal to that required by the student of the regular school in the same department. In conformity with established usage, this degree could be conferred by the Regents only on the recommendation of the faculty of the college of homeopathy. Now, as the faculty of any college consists of the teachers especially employed to qualify and recommend the student for the degree, it will at once be seen that the professors of anatomy, of physiology, surgery, chemistry and obstetrics, must be united practically with the newly-appointed professors of homeopathic practice and materia medica to constitute such a faculty. The merely technical dodge that they are by appointment members of another faculty, will not convince any one to the contrary in opposition to this single prominent practical fact. The professors of the old school, therefore, bear the same relation as teachers, examiners, and final judges of qualifications for the degree in homeopathy, as they do to the class of candidates for honors in the school of regular medicine. By another technical dodge, to avoid an humiliating self-conviction by the faculty of the old school, the Regents have abolished the time-honored custom of affixing the signatures of the faculty to the diplomas. Hence, in the future the faculty no longer testify to the qualification of the graduate, but only the president and secretary.

I think, therefore, it will be conceded by every one who prefers actual facts to mere subterfuges, that as practically more than two-thirds of the faculty of the so-called college of homeopathy are also members of the faculty of the college of regular medicine, that the fusion of the faculties of the department of medicine is nearly complete; and, further, that of whatever of merit or obloquy may, in the estimation of the regular profession, attach to such union for the promulgation of the absurd dogmas of homeopathy, the faculty of the old school will be entitled to a full share.

Very respectfully,

A. S.

DETROIT, August, 1875.

Editors of Detroit Review of Medicine and Pharmacy:

I have this moment laid down a Philadelphia *Medical and Surgical Reporter* of August 28, 1868, and under the head of "Correspondence" I find a letter from Prof. A. B. Palmer, of our State University, explaining the position of the medi

cal department of that institution in relation to the appointment of a homeopathic professor, which was unsuccessfully attempted at that time.

Stating that the Regents under no circumstances would establish a chair of homeopathy in the department at Ann Arbor, "*to disturb its curriculum and introduce confusion and ruin,*" he finishes up in the following style: "It can readily be understood that the medical faculty have been placed in a very embarrassing position; the pressing wants of the University, and charges of illiberality, unfairness and prejudice being on the one hand, and professional honor and interests of medical science on the other.

' Hastily abandoning their positions would have led to the triumph of folly and error, and the ruin of the largest, and, as they believe, one of the best medical schools in the country; whilst quietly yielding to such an unnatural association would have been a sacrifice of self-respect and professional reputation which could not for a moment be thought of. They have done what they have regarded their duty to the profession and themselves and we are happy in the belief that they have not sacrificed the honor or interests of either,

"The most impressive lessons of wisdom are bought by experience, and if the lesson of these experiences be heeded, no further attempts will be made to mingle in the same institution elements so totally incompatible as scientific medicine and the exclusive and absurd system of homeopathy."

I have called your attention to the foregoing simply with the view of asking Prof. Palmer, as one who years ago sat under his teachings, and therefore could not fail to imbibe many of the ideas he held regarding homeopathy at that time, and which he must still have held when he penned the above, how he reconciles his conscience to the present position of things in the University? Are "professional honor and the interests of medical science" less dear to him now than then? Has he concluded to sacrifice self-respect and professional reputation by "quietly yielding to "such an unnatural association?" Or has he just discovered that the "elements so totally incompatible as scientific medicine and the exclusive and absurd system of homeopathy" are more compatible than he thought they were? I pause for a reply. Verily, consistency is a jewel!

HENRY A. CLELAND, M. D.

PROF. A. B. PALMER'S VIEWS.—The friends of this gentleman have waited long and patiently for an expression of his opinions concerning his present relations. They are interested to know whether he has changed his principles on which for so long a time and so valiantly he fought the enemies of scientific medicine. Upon what platform does he now stand? We cannot answer this question, but we can show what he once believed. This we shall do by some brief extracts from the proceedings of the eighth annual meeting of the American Medical Association.—*Peninsular Journal of Medicine*, Vol. 3, p. 21.

Dr. Atlee, of Pa., offered the following resolutions:

Resolved, That, to secure efficient teaching in medical schools where a prime object is to enforce practical precepts, a large degree of harmony must exist among the teachers, and confidence be reposed in them by their pupils.

Resolved, That any such unnatural union as the mingling of an exclusive system, such as homœopathy, with scientific medication in a school, setting aside all questions of its untruthfulness, cannot fail, by the destruction of union and confidence, and the production of confusion and disorder, unsettling and distracting the minds of the learners, to so far impair the usefulness of teaching as to render any school adopting such a policy unworthy the support of the profession.

The resolutions were seconded, accompanied by the remark that they had ref-

erence to an attempt made in Michigan to thrust homœopathy into the medical department of the University of that State. Dr. Palmer, the delegate from the medical department of the University, was called upon for a statement upon the subject. We quote but a small portion of his somewhat extended remarks.

He said that such an attempt had been made, and that a report had gone forth that such a chair had been established. An act had passed the Legislature during the last hours of its recent session providing that a chair of homœopathy should be established in the medical department of the University, although the regents had not, and he believed would not, make any such appointment.

He had no doubt that the sentiments contained in the resolutions offered by the gentleman from Pennsylvania were those of this learned and dignified body—a body which had been spoken of as “the assembled wisdom of the profession,” and that all men of sense and principle in the profession, who had reflected upon the subject, or who knew anything of medical schools, entertained such views.

He well knew that a school adopting such a course as was indicated and denounced in the resolutions would fall under the deep condemnation of all regular physicians, and that without their confidence and support it could be supplied only by such materials as the irregular are usually made of and must fail and become extinct as a respectable and orthodox institution. It could not and would not receive your support. This being the unquestioned fact, the sentiments of the resolutions being such as the profession entertained and would act upon, he could but approve whatever might be the result of their expression at this time and by this body. If there were any present that entertained other views; if there were any that would extend their patronage to a school where such incongruities were brought together; where the lecture of one hour was flatly contradicted by that of the next; where all union and all harmony, and all concord were destroyed; where a policy was adopted which would be the same in effect as the introduction of a Mohammedan teacher in a Christian Sunday school or bible class; if any could approve or tolerate such a course, he hoped we should hear from them; but if, as he anticipated, we were all of one heart and one mind, let there be a united expression, which should show to the regents of the University of Michigan, what would be the result to their cherished institution.

Again, the founders of the medical department of the University sought in its organization to follow your directions; those connected with it now seek to render it worthy of your approval; and in the worst event, should they fail to accomplish this object, they intend at least to save their own professional honor untarnished amid the ruin. The resolutions of Dr. Atlee, and the remarks upon them were received with strong expressions of approval, and the resolutions were unanimously adopted.”

Since the above was written we have received a “Statement” from the Faculty of Medicine and Surgery in the Michigan University concerning their relations to

Homeopathy in the University, signed by Dr. A. B. Palmer in behalf of the Faculty.

This statment does not throw any light upon the subject, but it takes a stand decidedly in opposition to that assumed by Prof. Palmer in his remarks, already quoted, at the American Medical Association.

If Homeopathy is to be taught at the Michigan University let it be taught by a complete faculty which shall in no wise be composed, in part, of the members of the present Faculty of Medicine and Surgery. Until such is the case the profession must look with a degree of suspicion upon the present state of affairs, and students attending the Medical Department of Michigan University will be regarded with a degree of suspicion by their professional Associates. It will be interesting to see whether in the Announcement of the Homeopathic lectures the Professors in the regular department will be included under the head of faculty, with the Homeopathic Professors of Materia Medica and of Theory and Practice of Medicine.

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An Unmitigated Quack.

Letters have been received by members of the Faculty of the Medical Department of the University of Buffalo in regard to the following, taken from a Leavenworth, Ka., paper.

DR. C. P. MARSHALL, Physician-in-Chief of Throat and Lung Department of the Buffalo City Hospital, and Professor of the Diseases of the Throat and Lungs, in the Medical Department of the Buffalo, N. Y. University, is now in our city, on his return from Colorado, and the Rocky Mountain district, which he has been visiting, with a number of his patients, to test the curative power of that congenial clime in consumptive cases.

The doctor is stopping with his patients for a few days at the Mansion House, where, he states, he would be happy to see, converse with, and examine, *free of charge*, any of the citizens of this community, who may be suffering with any throat or lung complaint, and will most cheerfully give them the benefit or his experience with the climate of Colorado in the cure of all their maladies, besides many useful hints that may prove of great benefit. All are cordially invited to give him a call.—*Leavenworth Daily Times*, September 3, 1875.

The Dr. (?) Marshall referred to came to Buffalo some time since claiming to have been Surgeon-in-Chief to the Brooklyn City Hospital and to have been connected with various Medical Institutions in New York and Brooklyn. His boastful claims and extensive advertising were sufficient evidence of their lack of truth. He was, however, vouched for, we believe, by an Editor of the *Sunday News* and doubtless caught a few dupes. Of his success as a practitioner we have no knowledge, we only know that some of his creditors would be most happy to see him. We believe he has not yet returned from that Rocky Mountain tour and infer that he will not do so for some time to come. It remains to be seen whether the paper which devoted so many columns to his laudations will be willing to occupy a few lines with an account of his efforts to gain notoriety and cash upon false pretenses.

Meeting of the American Pharmaceutical Association.

The recent meeting of this Association, which was held in Boston, was largely attended and full of interest. The address by the President, C. Lewis Diehl, of Louisville, Ky., was full of interest. Among other things he referred to the new remedies recently introduced, jaborandi and salicylic acid. Among the interesting reports was one by Dr. A. W. Miller, of Philadelphia, on adulterations and sophistications of Drugs. He said that essential oils were largely adulterated, often in a clumsy manner. A large number of instances were cited which had been brought to the notice of the committee in which important drugs had been largely adulterated. This is a matter of great interest to physicians as well as to pharmacists, and something should be done to punish the offenders. The report on the Progress of Pharmacy was a very elaborate essay from the President, Mr. C. Lewis Diehl, more extensive it is said, than the one made by same gentleman last year which occupied over three hundred pages in the volume of proceedings. A large number of interesting essays and reports were made. The exhibition of rare drugs, chemicals and improved laboratory apparatus was very large and valuable.

The members were handsomely entertained by their brethren in Boston, who treated them to banquets, hops, concerts, &c., in profusion. The Association meets on the second Tuesday in September, 1876, in Philadelphia.

ANNOUNCEMENT.—Under the head of Medical Notes Dr. George E. Blackham, of Dunkirk, has kindly consented to furnish the JOURNAL with occasional notes on Microscopy. Dr. Lucien Howe, of this city, will also contribute notes on the progress in Ophthalmology. It is our intention to make this department of the JOURNAL a record of the progress in the various branches of medical science, and to this end shall spare no pains to make it interesting and instructive.—OPENING OF THE LECTURE COURSE.—The course of lectures in most of the medical colleges have already commenced or will do so in a few weeks. The preliminary term at the Buffalo Medical College will open Wednesday, Oct. 6th, the regular term on the 3d of November. The Medical and Surgical Clinics and Lectures on special topics will be given during the preliminary term.—CHICAGO MEDICAL JOURNAL AND EXAMINER.—The *Chicago Medical Journal* and the *Medical Examiner* have been united under the above head. The new Journal is published by the Chicago Medical Press Association and is edited by Wm. H. Byford, M. D., assisted by Drs. Jas. H. Etheridge, Norman Bridge, J. N. Hyde and F. C. Hotz.—NEW CHAIR.—The Starling Medical College, Columbus, Ohio, has a Professor of Ovariectomy.—CODE OF ETHICS.—The Code of Ethics of the American Medical Association has been unanimously adopted by the Medical Society of Munich, and translated into the German language.—SYPHILITIC GHOST.—Prof. Ziessl, of Vienna, is reported to have said in a clinic "that if a man contracts syphilis, he will die syphilitic, and at the judgment day his ghost will have syphilis."

Books Reviewed

A Manual of Diet in Health and Disease. By Thomas King Chambers, M. D., Oxon., F. R. C. P., London. Philadelphia: Henry C. Lea, 1875. Buffalo: F. Butler & Son.

There seems to be a peculiar charm about the style of Dr. Chambers' writing which adds much to the pleasure of the reader of his works. Even the driest detail he makes readable and interesting. The volume is divided into three departments: General dietetics, special dietetics in health, and dietetics in sickness. In the preface the author says that his aim has been to make a practical work, and hence all allusion to the chemical and other questions involved is purposely omitted. The portion upon general dietetics treats of the theories of dietetics, the choice of food, its preparation, digestion, and nutrition therefrom derived. These chapters are full of interest, and serve as an introductory to the succeeding section on the special dietetics of health. Commencing with infancy and the regimen of motherhood and infancy, the author proceeds through the stages of childhood and youth, and thence to the various callings and conditions of active life. Under this head also are introduced what he styles hints to the traveler, a chapter on effects of climate, one upon starvation, poverty and fasting, and also upon the decline of life, and one in which the subject of alcohol is considered.

Dr. Chambers differs from the views of Anstie that alcohol, uneliminated, tends to nutrition, and is therefore a food. He, however, thinks that it is of value, and sanctions its use in certain cases when employed with care and judgment. Written by an Englishman for English readers, the work is in some respects not adapted to the habits and characters of the American people, but with slight modifications it will be found to be a most valuable guide to the thoughtful reader, of whatever country.

The closing section of the work, upon the dietetics of disease, embraces nine chapters, a chapter being devoted to each of the large classes of disease, as nervous disorders, inflammations, febrile disorders, consumption, diseases of the circulatory apparatus, etc. Many of the receipts are new, and all are well considered, and seem perfectly adapted to disorders for which they are recommended.

The style of the work makes it valuable to the general as well as to the professional reader, and on the whole it is the best of its kind with which we are acquainted.

A Report on the Hygiene of the United States Army, with Descriptions of the Military Posts. Circular No. 8, War Department, Surgeon-General's Office. Washington: Government Printing Office, 1875.

The report on the Hygiene of the Army is from the pen of Assistant-Surgeon J. S. Billings, and occupies the first fifty-five pages of the report. This report

shows an advance in the hygienic regulations of the army during the last five years which reflects credit upon the Medical Department. The effort is being made to place everything pertaining to the soldiers' wants, as clothing, food, etc., of the highest standard of excellence.

The discussion of hospital construction is an interesting one. Dr. Billings accepts the plan of the barrack hospital of wood intended for temporary occupancy as the best yet advanced. He does not think that the source of contagion may be looked for as much in the saturation of the walls of the building as in the furniture, clothing, etc.

The greater portion of the work is filled with a description of the military posts throughout the United States.

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Books and Pamphlets Received.

Vision: Its Optical Defects and the Adaptation of Spectacles, with seventy-four illustrations on wood and selections from the test types of Jaeger and Snellen. By C. S. Fenner, M. D. Philadelphia: Lindsay & Blakiston, 1875. Buffalo: T. Butler & Son,

Transactions of the College of Physicians of Philadelphia. Third series, volume first. Philadelphia: Lindsay & Blakiston, 1875.

Transactions of the Medical Association of the State of Alabama, 1875.

Transactions of the Medical and Chirurgical Faculty of Maryland, 1875.

Uronology and its Practical Applications. By George M. Kober, M. D. Reprint from the Richmond and Louisville *Medical Journal*, with illustrations.

Fracture of the Inferior Maxillary Bone. By Jos. F. Montgomery, M. D. Reprint from the Transactions of the California State Medical Society for 1875.

A Statement of the Relations of the Faculty of Medicine and Surgery of the University of Michigan to Homeopathy.

B U F F A L O

Medical and Surgical Journal.

VOL XV.

OCTOBER, 1875.

No. 3.

Original Communications.

ART. I.—*On Unreduced Dislocations of the Shoulder Joint (sub-glenoid) with the report of Two Cases, One of Two Hundred and Thirty Days Duration, and One, Congenital, of Eleven Months, Reduced by Prof. J. F. Miner, M. D., Together with reference to other Cases of long standing which have fallen under my Observation.* By EDWARD N. BRUSH, M. D.

Dislocations of the shoulder occur more frequently than of any other articulation, and the diagnostic signs of the luxation are such that the accident is recognized in most cases with but slight difficulty. It some times, however, occurs that owing to other complications, to great swelling, or absence of pain, that the accident is overlooked, or, if suspected, is not recognized. Owing also to the known liability of this joint to consecutive luxuation, cases occur in which, after the dislocation has been properly reduced, re-luxation results, which is, owing to the absence, or superficial character of subsequent examinations, overlooked.

It thus occurs that a certain number of unreduced dislocations of this joint are constantly coming forward for advice and treatment. Sir Astley Cooper placed the period at which reduction could take place at three months, this seems, however, to be considerably within the limit of possibility, though the difficulties attending reduction rapidly increase as this period is passed.*

*Erichsen. Science and Art of Surgery, Vol. 1, page 413. Gross. A System of Surgery, Vol. 11, page 76.

Thus reduction has been effected by Brodhurst after twenty-five weeks; by Nathan R. Smith after six, seven, eight, nine and ten months; by Malgaigne after eight months; by Caron du Pillard after six months, and by Sédillott after a year. By the use of subcutaneous division of the muscles and capsular ligament, Dieffenbach is said to have effected reduction at the end of two years.*

The interest which is naturally connected with a luxation of as frequent occurrence as that of the shoulder joint will admit of a brief resumé of the subject. First as to diagnosis. When seen soon after the accident this is generally easy to determine. The only accidents liable to be mistaken for it are fracture of the neck of the humerus, and epiphyseal fracture of the superior extremity of that bone.

A careful examination, the absence of the head of the bone from the axilla, and the presence of crepitus will generally suffice to distinguish fracture of the neck from dislocation. In epiphyseal fracture, however the case is different and the accident is frequently confounded with luxation. In separation of the epiphysis the crepitus, if obtained, is of a muffled character, resembling exactly that sometimes felt in old dislocations. In obedience also to a law which governs dislocations, the bones are moved into and retained in a definite place by the muscles. An intelligent appreciation of the symptoms of this fracture set forth by Prof. R. W. Smith in his treatise on fractures in the neighborhood of joints, and more recently by Dr. E. M. Moore,† of Rochester, will serve to distinguish it from dislocation; and the fact that it never occurs after

*Since Oct., 1872, the following cases have fallen under my observation:

CASE I. J—, aged 46, of C—, N. Y., dislocation into the axilla of twelve weeks duration treated as a sprain. Reduced by Dr. Miner under Ether on Oct. 23d.

CASE II. Eddie F—, aged eleven months. Dislocation since birth. This case will be referred to in detail in the course of the paper.

CASE III. J. L., of Oswego, N. Y., aged 32. On Sept. 14, 1873, he fell through a bridge, striking on his elbow. A physician was called who diagnosed fracture of the shaft of the humerus and applied splints. On the tenth of Dec. following, Dr. Miner, assisted by Dr. Cronyn, easily reduced the luxation by the use of extension and rotation of the arm. On Dec. 20th, patient was discharged well.

CASE IV. C. W. S., a blacksmith, aged 60, received an injury resulting in dislocation, Aug. 14, 1874. Unsuccessful efforts at reduction were made at his home in the country. Having been sent to Buffalo, on the 24th of October, Dr. Miner succeeded by means similar to those employed in other cases, namely extension, counter-extension and rotation in reducing the luxation. One month after the reduction, the arm, which had become somewhat atrophied, was found to be rapidly regaining its usefulness. (See report of clinical remarks. By W. W. Mincer. BUFFALO MEDICAL JOURNAL, Dec., 1874, page 183, Case VIII.)

CASE V. Henry A—, aged 53. Dislocation of over seven months. See report in subsequent part of this paper.

†Epiphyseal Fracture of the Superior Extremity of the Humerus. By E. M. Moore, M. D. Transactions of the American Medical Association, Vol. XXV, 1874.

the nineteenth or twentieth year, will exclude its consideration from many cases. In any case, however, the presence of dislocation may at once be determined by the application of a test first brought before the profession by Prof. Dugas,* of Georgia. When the head of the bone has left the glenoid cavity, if the hand of the dislocated arm be placed on the opposite shoulder, the elbow will project from the chest, and as long as the dislocation remains it will be found impossible to place the elbow against the chest with the hand in this position. Neither in a contusion nor a fracture is this the case.

Prof. Frank H. Hamilton has recently in a clinical lecture brought out two new differential signs in dislocations of the shoulder, which are fully set forth in the following extract from the lecture.†

“First, While the head of the humerus remains in its socket, if a rule be laid upon the outside of the arm from the shoulder to the elbow, it will not touch the acromion process, but will be distant from it at least half an inch, generally one inch or more. On the other hand, if the bone is removed from the socket, in whatever direction it may be displaced, whether forwards, downwards, or backwards, unless the shoulder is much swollen, the rule, placed in the manner above stated, will touch the acromion process.

Second, If, standing behind the patient (in case of the right shoulder) the thumb and forefinger of the left hand is made to grasp the top of the shoulder in such a manner as that the interdigital commissure shall rest upon the acromion process, just outside of the acromio-clavicular articulation; and if then the finger and thumb are dropped perpendicularly, the tip of the finger will (in case the head of the humerus is not dislocated) rest upon the center of the round upper extremity of the humerus, as it projects in front of the acromion process, while the end of the thumb will rest upon the head of the humerus behind; but the head will be felt indistinctly by the thumb, for the reason that, instead of projecting as it does in front, it actually recedes a little beneath the acromion process. Up to this moment the surgeon may entertain some doubt whether he is actually grasping with his thumb and finger the head of the bone; but if he now moves the elbow of the injured limb forwards, so as to carry the head of the humerus backwards in its socket, he will feel it press strongly upon the thumb, and this will be conclusive. If a dislocation exists, the

*Report on a New Principle of Diagnosis in Dislocations of the Shoulder Joint. By L. A. Dugas, M. D. Trans. Amer. Med. Assoc., Vol. X.

†The Medical Record, March 27, 1875, p. 220.

head of the bone cannot be felt in this situation, and by the thumb thus placed.

I have told you that both of these differential signs, in their application to shoulder joint injuries, are liable to one exception. The phenomena would be the same, so far as these two signs are concerned, whether there was a dislocation of the head of the humerus, or a fracture with displacement of the neck of the scapula. The latter accident must, therefore, be first excluded by a careful application of the rules of diagnosis given in our treatises upon surgery."

In a case which fell under my observation in January, 1875, Dr. J. F. Miner, by an application of Prof. Dugas' mode of diagnosis, and by obtaining crepitus, readily demonstrated that a case which had been treated for six weeks by a physician of experience in this city, for dislocation, was a fracture of the neck of the humerus.

Cases of so-called partial dislocation may make the matter of diagnosis obscure, but as it is the generally accepted belief of writers that this condition is only obtained as the result of a pathological and not of a traumatic cause, these may be excluded. When the long head of the biceps is displaced, or torn off, the head of the bone is carried upward and forward, producing what has doubtless been termed a partial dislocation by some surgeons. In a case of dislocation of the humerus, of ten weeks duration, reduced by Dr. Miner, on October 24, 1874, this condition was present; but as there was considerable deposit in the glenoid fossa, it is possible that the unnatural position of the bone was assumed for that reason, and that the biceps tendon was not torn. Should the dislocation of the shoulder be unrecognized through failure to apply the foregoing test or should attempts at reduction fail, or if successful, re-luxation occur and escape notice, what is the prognosis? As before stated, no period can be definitely stated at which reduction would not be possible. Prof. Gross tells us that he has failed in one instance at the sixth week, though he has succeeded at a much later period. It thus seems that a certain prognosis cannot be made, moreover such injury may be done to the circumflex nerve or axillary plexus that the arm, even if reduced, will be either wholly, or in part, paralyzed. This accident, however, may not be of a permanent character, slight injuries of the nerve being followed in a certain number of cases by recovery, under appropriate measures.

In no case should an unfavorable prognosis be made, where the nerve lesion is not plainly of a grave character, and where the time since the dislocation is not more than a year. When a new cavity has been formed for the head of the bone, or extensive inflammatory action has produced considerable adhesion, rendering the danger of tearing the axillary plexus, or artery, imminent, the propriety of an attempt at reduction may be questioned.

In attempting to restore an unreduced luxation of the shoulder joint, the surgeon has the choice of many procedures. As simple manual manipulation will, in all probability, prove futile, the first attempt should be made with the heel in the axilla. This simple method will often suffice, and is much better than the resort to the more complicated, and perhaps more dangerous, one of the use of the pulleys, or adjuster.

The patient may be placed on the floor on a mattress, or what is still better, upon the floor itself. Complete relaxation being produced with ether, the surgeon is to employ the various methods described for the reduction of the dislocation. It will be found in most cases that the head of the bone goes back into the glenoid cavity without the noise which accompanies the reduction of recent luxations. In fact, the surgeon will often be surprised to find on examination, that reduction has been effected without his notice. The reason of this probably lies in the fact that the glenoid cavity has become filled in by a deposit of new material. Should reduction be found to be impossible by any of the ordinary means, the tendons of the muscles surrounding the joint, and the capsular ligaments may be divided subcutaneously as has been practiced by Dieffenbach. In a case of twenty-five days standing, in Guy's Hospital, reduction was made by placing an air pad in the axilla and firmly binding the arm to the side. On removing the bandage at the end of three days the arm was found reduced.* Other methods will, however, prove as effectual as this, and certainly less tedious.

The accidents which may occur in attempts to reduce an old dislocation of the humerus are, fracture of the arm, rupture of some portions of the axillary plexus, rupture of the axillary artery

*Bryant. *Diseases and Injuries of the Joints*. 1859, p. 227.

or of the vein, and fracture of one or more ribs. Fracture of the humerus, especially if near the superior extremity, will, of course, render the reduction of the dislocation still more difficult, but the attempt should not be abandoned, even on this account. Dr. Hamilton cites an instance in which he succeeded in reducing a dislocation complicated by fracture, on the eighth day.* In September, 1873, J. M——, a pedler, residing on Michigan street, tripped on an irregularity in the walk, while carrying his pack, fracturing the humerus at the upper extremity. When brought to Dr. Miner's office, crepitus could be obtained on motion of the fragments, but there existed also a depression immediately beneath the acromion process, which indicated dislocation. Examination revealed the presence of the head of the bone in the axilla. Ether was administered, and by extension, aided by the fingers of an assistant to guide the head into the glenoid cavity, reduction was effected. This being accomplished, the fracture, which could now be plainly made out, was dressed, and at the earliest moment passive motion of the joint employed. The result was perfect union without impaired function of the arm.

Should it be found impossible to reduce the head of the bone, the fracture should be dressed and allowed to unite, and at the earliest moment possible another effort should be made to reduce the dislocation.

Rupture of the axillary artery or vein, or some portion of the axillary plexus is more apt to occur where extensive inflammatory adhesion has bound them to the surrounding parts. I am indebted to Dr. De Forrest Willard of Philadelphia, for the following list of cases in which rupture of either the artery or vein has taken place.†

"After a somewhat extended search through the reports of the hospitals of America and England, and in the various journals published in these countries, I have succeeded in collecting the following cases: The most complete records have been found in Malgaigne's *Traité des Fractures et des Luxations*, and in Flaubert's *Mémoires sur plusieurs Cas de Luxations*, etc., *Répertoire d'Anatomie et de Physiologie*, 1827, and Hamilton's *Treatise on Fractures and Dislocations*, 1871.

*Hamilton. *Fractures and Dislocations*. 1875, p. 565.

†Philadelphia Medical Times, Aug. 16, 1873, p. 721. Notes on Clinical Lecture by Prof. D. Hayes Agnew, M. D.

The sole case of laceration of the axillary vein alone is that mentioned by Froriep,*—a scrofulous woman, æt. 36, in whom the dislocation had existed for twenty days. The vein was torn entirely across, and the patient died in one and a half hours.

This, and the one of Agnew's above recorded, constitute the entire list of accidents to the vein alone.

Platner† has put on record a case in which both vein and artery were injured, the patient dying of hemorrhage from the subsequent rupture of the sac.

Guérin‡ tore the entire arm from the body of a woman 63 years of age, in reducing a luxation of three months' standing, and of course all the structure at the axilla must have been severed.

Charles Bell§ also reports that during the use of the ambe at the Newcastle Infirmary not only was the axillary artery ruptured, but also the surrounding structures to such an extent that immediate amputation became necessary. It is highly probable that the vein was also injured; but the report is incomplete, especially in the fact that the result is not stated.

In Lendet's|| case, in Ronen, in 1824, an enormous swelling appeared in the axilla, immediately after reduction, which, though imparting no pulsation to the fingers, could be seen with the eye to rise and fall with the contractions of the heart. Gangrene supervened in three days, and the patient died in ten, of hemorrhage. A post mortem examination revealed the fact that the artery was torn across, the rim of the glenoid fractured, and the muscles lacerated.

In Johnson's *Medico-Chirurgical Review*¶ are recorded several cases from the French of Flaubert,** in which that author states that he himself saw four cases of injury to the axillary or brachial vessels or nerves, and believes either that he has been singularly unfortunate or that other surgeons have not been honest in their reports.

One of these cases was an axillary dislocation, attempts at the reduction of which were followed by an enormous swelling, syncope, and extreme prostration, the patient narrowly escaping. Another was a dislocation of the elbow, which was followed by a similar result, the brachial artery probably having been injured. Another was undoubtedly emphysematous, as the tumor appeared during violent outcries, and was supra-clavicular, extending over the shoulder and to the back; and in the remaining case the nerves were lacerated. He also reports another case in which the patient died after attempts at reduction of a dislocated hip.

Verduet†† ruptured the artery, and the patient died.

*Veraltete Luxationen, etc., Weimar, 1834, p. 35.

†Hamilton on Fractures and Dislocations, 1871, p. 561.

‡Erichsen's Surgery, fifth American edition, 1869, p. 307.

§System of Operative Surgery, vol. ii. p. 246.

||Gibson's Surgery, 1835, vol. i. p. 346.

¶Vol. xi. p. 452.

**Mémoires sur plusieurs Cas de Luxations, etc., Repertoire d'Anat. et de Phys., 1827, obs. 3.

††Operations de la Chirurgie, 1693, t. i. p. 559.

Petit* and Delpech† met with similar accidents and similar results.

David,‡ Hôtel de Rouen, reduced a luxation of several weeks' standing, using immense force, and the patient died of mortification, the supposed cause being a rupture of the artery.

Pelletan,§ while attempting to reduce a luxation of four months' standing, discovered a tumor which he supposed to be emphysematous, but upon opening it the patient perished from hemorrhage.

Dupuytren|| reports a case in which a woman 60 years of age had an axillary dislocation of six weeks' standing successfully reduced. Two or three months subsequently, however, a tumor appeared in the axilla, which, being mistaken for an abscess, was opened, and the patient died on the eighth day from secondary hemorrhage.

Nélaton¶ also had an aneurismal tumor appear three months after the reduction of an axillary dislocation, for the cure of which he tied the subclavian, but with what result is not recorded.

Malgaigne** was compelled to desist from attempts to reduce a displaced humerus of sixty-eight days' duration on account of the occurrence of a tumor in the axilla, which, being, however, subsequently arrested in its growth and absorbed under the use of ice, compression, etc., he decided to be due to rupture of the muscular branches instead of the axillary.

Desault†† met with two or more cases;‡‡ but they are to be received with some doubt, having been considered by him as "tumeurs aériennes," or instances of emphysema. Malgaigne, however, believes that they were produced by a rupture of at least the muscular branches of the artery, "the pulse of the patient being scarcely perceptible in the side affected and a syncope which supervened appearing to favor the suspicion of a rupture; but, in the absence of fluctuation, of pulsation, and of any change in the color of the skin—the return of the pulse, the circumscription of the tumor, its resistance, and the sound caused by striking upon it, produced the belief that it was owing not to an effusion of blood, but to a disengagement of air that had been confined in the lacerated cells of the cellular membrane." The tumor entirely disappeared in thirteen days, leaving a large ecchymosis, however, for a month or more.

Callender§§ tore a small opening in the upper wall of the artery in attempting to reduce a dislocation of six weeks' standing. He

*Hamilton, *op. cit.*, p. 564.

†Malgaigne, *Traité des Fractures et des Luxations*, 1855, t. ii. p. 152.

‡*Amer. Jour. Med. Sci.*, 1828, p. 136, and *First Lines of Pract. Surg.*, S. Cooper, vol. ii., p. 465.

§*Rep. Gen. d'Anat. et de Phys. Path. et de Chirur. Clinique*, 1827, t. ii. p. 95.

||*Leçons Orales*, second edition, t. iii. p. 12; Pelletan, *op. cit.* p. 83.

¶*Erichsen, op. cit.*, p. 307.

***Desault's Works* by Caldwell, p. 149; *Journal de Chirurg.*, t. iv. p. 301.

††*Op. cit.*, p. 150.

‡‡Bichat's *emoire sur la Luxation de l'Humerus*, in § 74 says occasionally, but in § 68 twice.

§§*St. Barthol. Hosp. Rep.*, 1866, vol. ii. p. 96.

very wisely laid open the tumor, turned out the clot, and tied the vessel both above and below the bleeding orifice. The patient died soon after with symptoms of pulmonary embolism.

Warren,* of Boston, reports a case in which a man 30 years of age fell and dislocated his shoulder. Violent attempts at reduction were made, and, according to the statement of the patient, the booted foot of the operator was placed in the axilla. When he entered the hospital, the arm and shoulder were greatly swollen, but after this subsided the bone was found in its normal place. Five days subsequently, during a fit of coughing, something "gave way," soon followed by a large swelling and discoloration in the axilla. No pulse could be discovered at the left wrist, and the tumor in the axilla became enormous. In six weeks an abscess formed and opened, discharging dark, coagulated blood. Upon the third day there was a sudden gush of blood, which was arrested by pressure, and on the following day Warren tied the subclavian artery. The patient made good recovery, and in one year afterwards slight pulsations could be distinguished in the radial. In sixteen months the man was greatly improved.

Gibson† twice met with the accident, and was honest, as usual, in reporting each case. The first was in the person of a man 50 years of age, whose left shoulder had been dislocated for two months. For two weeks subsequent to the accident it had been treated as a fracture, and after this ineffectual attempts had been made to reduce the deformity. He was admitted to the Philadelphia Hospital, and, after various manipulations and the trial of all the ordinary means employed, success was at last attained, and the head of the bone slipped into its place. In a short time, however, a swelling was noticed in the axilla, which slowly increased in size, the patient being painless and cheerful, until the evening, when the symptoms of depression becoming alarming, Prof. Gibson was sent for, but arrived too late to save the patient.

At the autopsy the artery was found entirely torn across, it having been firmly bound down by old adhesions to the capsule of the joint where it surrounded the neck of the bone.

His second case was a man 35 years of age, who had dislocated his shoulder nine weeks previous to his entrance into the hospital, and who had already passed through four attempts at reduction, in one instance having been suspended by the axilla over a door.

After a week's depletion, in accordance with the practice in vogue at that time, the attempt was again made by Gibson, assisted by a number of prominent surgeons. Extension and counter-extension were maintained by pulleys for half an hour continuously, after which rotary movements and all the usual methods of

*Amer. Jour. Med. Sciences, vol. xi., N. S., 1846; Med.-Chirurg Transactions, vol. xxix., p. 25, 1846.

†Gibson's Surgery, vol. i., pp. 325, 334; Chapman's Philadelphia Jour. Med. and Phys. Sciences, 1823, vol. vii., p. 81; Amer. Jour. Med. Sciences, 1828, p. 136.

reduction were faithfully but cautiously and gently tried for one and three-quarter hours, when they were finally successful.

Upon the next day, however, a pulsating tumor was discovered in the axilla, and on the following morning Gibson proceeded to tie the subclavian. The man, however, sank and died on the eighth day.

At the post mortem examination, which was carefully and accurately made, and which is fully described in his report of the case, the left hand and forearm were found in a state of incipient gangrene, while the ligation wound showed no attempts at union.

The artery was firmly attached to the bone and articular capsule by a ligamentous substance so compact and with so short a portion of the artery between this point of adhesion and the false attachment to the rib that it could hardly have escaped injury. The ends were separated half an inch, the utmost limit allowed by the adhering bands. The external coat of the artery formed the sac of the aneurism; but this had ruptured and allowed the contents to escape in the connective tissue.

"The walls of the true aneurismal sac were so compact a texture, and its boundaries so well defined, that the conjecture of its having existed previously to the reduction of the bone and that its rupture was a distant and subsequent event, is rendered probable."

The great tuberosity of the humerus had been fractured, but had partially united.

Blackman,* of Cincinnati, attempted the reduction of a dislocation of sixteen weeks' standing, which had previously resisted the efforts of six men with pulleys for two and a half hours. The manipulations of reduction, rotation, abduction, and elevation had been continued about ten minutes, when a sudden tumefaction occurred in the pectoral region and rapidly increased in size.

No pulse could be felt at the wrist; and, believing the artery to have been ruptured, the axillary was tied at the upper third of its course. Pressure was made by a broad band and compressed sponge, and on the following day the bulk was greatly diminished.

The patient did well for several days, but on the eleventh he perished from a hemorrhage at the seat of the ligature.

Lister† recently attempted the reduction of a dislocated shoulder of eight weeks' standing. The displacement was of the subcoracoid variety; and while pulling upward, as in La Mothe's method, he heard a distinct crack. No swelling appearing, however, and the head of the bone being still in its false position, various manipulations were employed, and the pulleys used, traction being made both downward, outward and upward. The force employed was not excessive, and efforts were finally discontinued.

Almost immediately afterwards, however, his attention was directed to an enormous swelling which appeared below and behind

*Western Lancet, Nov., 1856.

†Lancet, Feb. 1, 1873; Edinburgh Medical Journal, March, 1873.

the axilla, almost as large as an adult human head. The pulse being absent at the radial of the injured side, a rupture of the axillary artery was diagnosed, and the operation of tying it commenced. An incision was made directly into the axilla, and the extravasated partially coagulated blood turned out. The arm being held off from the side, the artery was so compressed against the head of the bone that no hemorrhage occurred; but upon being relaxed by the side of the body a free bleeding took place. The orifice was at last found to be concealed upon the posterior wall, from which a stream was so poured out into a cavity and reflected forward that it seemed to be a regurgitant stream from a large branch like the subclavian. Careful examination, however, proving that the main vessel was ruptured, a ligature was applied both above and below the opening, the vessel cut across, and the ends again secured. The opening was found to be about two lines in diameter.

The head of the bone was then removed, to facilitate subsequent reduction. The patient, although greatly reduced by the loss of blood, rallied a little, but soon sank, and died in three hours.

Mr. Lister, in his report of the case, regrets that he did not transfuse.

At the autopsy the explanation of the accident was evident, and is so instructive that I quote it in full:

“The surface upon which the head of the bone had rested in its new situation simulated cartilage in smoothness and firmness, and was formed anteriorly by a dense fibrous structure, strengthened with a considerable amount of osseous deposit in the form of a spicula, proceeding chiefly, though not exclusively, from the coracoid process and the surgical neck of the humerus; a state of things fully confirming the wife's report as to the long time that had elapsed since the accident. The broad and strong osteo-fibrous band thus connecting the humerus with the coracoid process had lain over the head of the bone, constituting a partial capsule for the new joint. At the same time it was intimately connected throughout, by condensed tissue, with the sheath of the axillary artery, which lay over it. Thus the vessel, instead of being surrounded by loose and yielding structures, as in the natural state, was attached, through the medium of the osteo-fibrous band, to the coracoid on the one hand and the neck of the humerus on the other; and when these bony points were separated from one another by the lever-like action of the humerus when the limb was drawn upwards, the artery as well as the band was necessarily subjected to violent traction. Accordingly, the band, as strong as it was, was found to have been torn right accross, and the rent in it was exactly opposite to the rupture in the artery. The giving way of the vessel had been rendered the more easy by atheromatous degeneration of its walls, which was present in an advanced degree.

The vein also showed evidence of having been extremely stretched, by considerable narrowing of its calibre at the same situation.

"The chief lesson to be learned from this sad case seems to me to be that in subcoracoid luxations there may be, as early as eight weeks after the accident, such adhesion of the artery to the scapula and the humerus as to make it dangerous to employ even the manipulative treatment without the pulleys, and especially the upward traction of the limb. For, as was remarked before, and will now be readily understood, the snap heard in the preliminary manipulation was in all probability caused by the rupture of the fibrous band above described, accompanied by the giving away of the vessel."

In common with Mr. Lister, Prof. Agnew also believes that the method of reduction by traction upward is, in old dislocations, more liable to produce a laceration of the vessel; and although it has been his favorite mode, and will be continued in all recent cases, yet in those of long standing he will first attempt others which do not put the artery so greatly upon the stretch.

He also believes that the limitation of the circulation by controlling of the subclavian assisted greatly in keeping a sufficient supply of blood in the brain to prevent fatal syncope, and in such sudden cases compression even of the abdominal aorta would be beneficial in keeping up the proper meningeal supply.

Another case, which would come very properly under a report of this kind, is recorded by Adams.*

The rupture of the artery in this case was not produced by the surgeon, but by the same accident which occasioned the luxation. The patient was thrown down by a runaway horse, and was brought to the Jervis Street Hospital with his left humerus dislocated and with an enormous swelling of the axilla. No pulse could be detected in the radial or brachial arteries of the injured side, and the patient was cold and prostrated, and so relaxed that the bone was slipped into its place by a slight manipulation.

The deep axillary swelling remained stationary for several days, no pulsation being perceptible either in it or in the arteries of the limb. After ten days, O'Reilly found the tumor upon the increase, and tied the subclavian in the third portion. The patient was seized with erysipelas and lost two fingers by gangrene, but he finally recovered, and was under observation several years afterwards.

The above constitute all the cases which have been discovered, and I believe that the report is complete to the present time.

Recapitulation.—Rupture of vein alone, 2 cases,—Froriep and Agnew: 1 fatal, 1 recovered.

Rupture of vein and artery, 3 cases,—Platner, Guérin, Bell: 2 fatal, 1 not stated.

*Todd's Cycl. Anal. and Surg., art. on Shoulder, Abnormal Conditions of. p. 616; Holme's Surgery, vol. ii., p. 827.

Rupture of the artery, 19 cases,—Leudet, Flaubert, Verduc, Petit, Delpech, David, Pelletan, Dupuytren, Nélaton, Malgaigne, Desault (2 cases), Callender, Warren, Gibson (2 cases), Blackman, Lister and Adams: 12 cases fatal, 6 recovered, 1 not stated.

The axillary artery was tied in 3 cases,—Blackman, Callender, Lister: all fatal.

The subclavian was ligatured 4 times.—Gibson (fatal), Warren (successful), Adams (successful), and Nélaton (not stated).

(Gibson did *not* tie the subclavian in his first case, as reported in most of the Surgeries.)

Total, 24 cases: 15 terminated fatally, 2 are uncertain, and 7 recovered.

The successful cases were those of Desault (2), Flaubert, Malgaigne, Warren, Adams and Agnew.

The case of Adams perhaps ought not to be reckoned with the others; yet it is so parallel an accident that I have deemed it advisable thus to place it.

Serious injury has also frequently been done to the axillary nerves; in some cases even the plexus being torn from the spinal column, in others various degrees of paralysis of the arm having followed. Malgaigne, Hamilton, Lenoir, Larrey,* and others report a number of cases.

Michaux (Hôpital de Louvain, 1841)† in reducing a luxation of the elbow tore off the median nerve and the brachial artery. He amputated, and saved his patient.

Various other accidents are reported as the results of efforts at reduction, but the above are all that are directly connected with the dislocation under discussion.

The cases are certainly sufficiently numerous to warn us against employing too much force; yet in the immediate case under notice only manual traction was made."

In connection with the foregoing, the history of the following case may not prove uninteresting, and its relation may add something to our knowledge of the possibility of the reduction of old luxations of the shoulder joint:

On the twelfth of January, 1875, Henry A—, of Fredonia, Chautauqua Co., N. Y., a farmer, aged fifty-three, weighing two hundred and thirty pounds, a strong, muscular man, while lifting a hog, which he had just killed, by the "gambrel," and with his arms extended above his head, fell, injuring his right shoulder. A physician was called, who at once diagnosed the character of the injury, and proceeded to reduce the dislocation of the shoulder, by

*Bul. de la Soc. Chirurg., i. 1.

†Debruyne, Des Luxations du Coude, These Inaug., Louvain, 1843, p. 77.

manipulation. The patient complained, however, of constant numbness in the hand and arm, stiffness, and inability to move the joint, a condition of things which time did not remedy.

On the thirtieth of August last Mr. A—— came to Buffalo to consult Dr. J. F. Miner. An examination of the shoulder at the time showed that the dislocation was unreduced.

A room was obtained for Mr. A—— at the General Hospital, and on the following day, two hundred and thirty days from the receipt of the injury, Dr. Miner proceeded to reduce the luxation. The patient was placed on a mattress on the floor, and ether administered by Dr. Rochester until complete relaxation was produced. A sheet was passed around the body under the axilla, to be used as a counter-extending band; this was placed in charge of an assistant. Another sheet was folded, and fastened by a clove-hitch to the arm just above the elbow. Removing his boot, and placing his heel in the axilla, Dr. Miner began to manipulate the arm in order to break up the adhesions which had formed. Then, flexing the forearm upon the arm, and while extension was being made by an assistant, by means of the sheet, Dr. Miner grasped the arm and forcibly rotated it outward by means of the forearm. This failed to reduce the dislocation. Keeping up the extension, the arm was now carried outward nearly at right angles with the body, and the same movement again instituted. After repeating this two or three times, the bone was felt to glide into its socket, the new adhesion being plainly felt to give way, but without that audible “snap” which so frequently accompanies the reduction of recent cases. It was now found that the arm could be freely moved in all directions, and that with the hand on the opposite shoulder the elbow rested on the thorax. With every evidence of perfect restoration, the arm was firmly bandaged to the side, and the patient placed in bed.

Five days after the reduction the patient returned to his home, being able at that time to make considerable motion with the arm. The numbness and pain had almost wholly disappeared.*

CONGENITAL DISLOCATIONS.—Dislocations of the shoulder joint,

*A letter from Mr. A——, dated October 15, says: “My arm is improving in motion and strength every day. I have no trouble with it slipping out of place.”

present from birth, whether the result of violent expulsive action on the part of the uterus, of falls or blows received by the mother during pregnancy, of some pathological change incident to intra-uterine life, or of violence at the hands of the accoucheur, may for convenience be classed under this one head.

Guérin* ascribes to some form of muscular contraction, and to corresponding muscular paralysis, not only dislocations of the long bones but also clubfoot and torticollis. He affirms that he has established, incontestably, the dependence of this abnormal state of the muscular system, upon the absence of some portion of the central nervous system. Breschet and Delpech, two French authors, who have given this subject much study, hold similar views, especially in relation to clubfoot.

Dupuytren holds that the causes of dislocations arise with the earliest development of the fœtus.

Carnochan† says that it appears most in accordance with science, to refer muscular contraction, upon which congenital dislocations depend, to a perverted condition of the excito-motor apparatus of the medulla spinalis. Hamilton arranges all these views under three heads:‡

“First, the physiological doctrines, according to which congenital dislocations are due to an original defect in the germ, or to an arrest of development.

“Second, the pathological doctrines, which refer them to some supposed lesion of the nervous centres, to contraction or paralysis of the muscles, to a laxity of the ligaments, to hydrarthrosis, or to some other diseased condition of the articulating apparatus.

“Third, the mechanical doctrines, which recognize no intra-uterine dislocations, except those which are strictly traumatic. The causes being understood to be the peculiar position of the fœtus in utero, violent contractions or the constant pressure of the walls of the uterus, falls and blows upon the abdomen, and unskillful manipulation of the child in delivery.”

Without, at the present time, entering into a discussion of these

*Guérin, *Recherches sur les Luxations Congénitales*; par Jules Guérin, Paris, 1841.

†A Treatise on the Etiology, Pathology and Treatment of Congenital Dislocations of the Head of the Femur; by John Murray Carnochan, M. D. New York: 1850.

‡A practical Treatise on Fractures and Dislocations; by Frank H. Hamilton, M. D. 1871, p. 761.

various causes, it may be admitted that all are capable of producing the accident under consideration.

As the result of paralysis, or of some other pathological cause incident to intra-uterine life, it is probable that luxations of the shoulder will not assume any one of the three positions known to be caused by traumatic influences, without greater or less modification. With accidents due to violence done the mother during the latter periods of utero-gestation, or to the foetus during delivery, it is different, and any of the three luxations may be the result. The diagnosis of dislocation of the shoulder joint in the infant, is to be made by the application of the same principles as in the adult. Attention will be called to it by an abnormal rigidity of the arm, a deviation of the humerus from its natural axis, and the evidence of pain manifested by the child when the limb is moved. The prognosis in cases seen immediately after delivery, where the luxation was caused by some accident incident thereto, is more favorable than where there exists some lack of development in the parts, or where the accident has happened early in intra-uterine life. When this dislocation is not discovered, or is left unreduced, a new articular surface may be formed for the head of the bone, as in the the following case of a lunatic, who died at the age of forty-two, having a congenital dislocation of both shoulders backwards. At the autopsy, Prof. R. W. Smith found the following condition: "The coracoid process was remarkably prominent, but the acromion was not so prominent as in accidental dislocations of the shoulder. The head of the humerus could be felt and seen, distinctly, moving with the shaft, upon the dorsal surface of the scapula. On removing the integuments, muscles, etc., no trace of the glenoid cavity could be found in the natural position; but upon the external surface of the neck of the scapula was a well-formed socket, which received the head of the humerus. This socket was covered with a cartilage of incrustation, and surrounded by a perfect capsule. The tendon of the biceps arose from the top and internal margin of the socket. The form of the acromion process was changed; the capsule smaller than natural, the head of the humerus irregularly oval, its anterior half alone being in contact with the glenoid cavity; the greater tubercle natural, but the lesser elongated and

curved, forming a process of an inch in length, around the base of which the tendon of the biceps muscles played.”*

In cases where the humerus has accommodated itself to its new position, as in the foregoing, any attempt at reduction would doubtless prove futile, and might be followed by disastrous consequences. In a case reported by Gaillard, he succeeded in reducing a dislocation in a young lady, aged sixteen, which had existed from birth. The head of the bone rested in the infra-spinous fossa; the scapula, clavicle and arm, were preternaturally small. The arm was made to undergo a preparatory course of extension and manipulation. On the fourth attempt it slipped into its socket, but at once became re-dislocated. By means of bandages it was retained in place on a second attempt, and at the end of two years had so much increased in strength, size and usefulness, as to encourage the hope that a cure would result.†

From the nature of the case, it is evident that the earlier the treatment is commenced, the greater probability there will be of success. In young infants, there will generally be but little difficulty in restoring the head of the bone to its place; but from certain anomalies in the attachments of the muscles, and from the extensive rupture of the capsular ligament incident to the attempts at reduction, great difficulty will be experienced in retaining the bone in place.

The following case of congenital dislocation, in an infant of eleven months, while it presents nothing out of the general line, will be found, perhaps, as an illustration of the value of the method adopted in its reduction, and as illustrating the possibility of reduction in similar cases, to present points of interest and value.

On the sixteenth of December, 1872, Mrs. F——, of Wellsville, Allegany Co., N. Y., brought her infant son Eddie to Dr. Miner on account of some trouble with his left arm and shoulder. The child was eleven months old, was well developed in every respect, was healthy, and well nourished. He had, from birth, exhibited a reluctance to move his left arm, and manifested evidences of pain when it was handled. Physicians who had been consulted had given

*R. W. Smith quoted by Hamilton. *Fractures and Dislocations*—p. 769.

†Gaillard *Mem. de l'Acad. de Med.*, 1841. From Hamilton, 1871.

different views upon the subject, generally being of the opinion that the child would outgrow the difficulty. The child had never received any blow or fall that could account for the lameness, neither had the mother been injured in any way during pregnancy. At her confinement she was attended by a midwife, who used some violence in the delivery. She did not know what the presentation was, but thinks, from what her attendant told her, that it was not the head. Taking these facts into consideration, it is probable that the injury occurred during delivery, and was not an accident of intra-uterine life. We may apply to it, however, the term congenital, as it certainly existed from birth.

An examination of the arm showed that motion could be pretty freely made from before backward, but that movements of the arm outward caused pain. There was a depression beneath the acromion process, of considerable depth, and a round body could be felt occupying the axilla. The elbow was carried somewhat backward, and away from the thorax. When the hand was placed over the opposite shoulder, the elbow projected still further from the side. A diagnosis of dislocation into the axilla was easily made, and from the general mobility of the joint, a favorable prognosis given.

December 18, the child was placed under the influence of chloroform, and the reduction made in the following manner: The scapula was firmly fixed in position by the writer. Grasping the arm with his right hand, and placing his left thumb in the axilla to guide the head of the bone, Dr. Miner attempted reduction by the usual mode of extension. This failing, after repeated trials, was discontinued. Substituting his left hand by that of his assistant, he flexed the forearm upon the arm, and making extension from above the elbow, the arm was carried outward from the body at nearly a right angle; then, using the forearm as a lever, the arm was rotated outward to its extreme limit, the head of the bone being at the same time forced upward by the assistant. This procedure was successful in restoring the head of the bone to the glenoid cavity, in which, as it rotated, it produced a fine, almost crepitant, sensation, showing that a deposit had formed in the socket. The elbow was supported in a sling, and the arm retained in position by broad bands of adhesive plaster and bandages. But

little inflammatory action was produced by the operation, and in a short time the child was discharged with a perfectly restored shoulder.

REMARKS.—The treatment employed in this case, and all those referred to in this article, will be seen to be a modification, in some respects, of the method of manipulation introduced by Prof. H. H. Smith, of Philadelphia. The resemblance lies in the rotation of the arm outward, while at an angle with the body, using the flexed forearm as a lever. Prof. Smith proceeds further than this, and in recent cases, his method is often attended with success. Having rotated the arm upward and outward, he reverses the movement by rotating the head downward and inward, at the same time carrying the elbow to the side. In ancient dislocations, however, this method of manipulation alone, will not be found to succeed. The modification consists in employing some force to act upon the head of the bone, while the extension and outward rotation is being made. This may be accomplished by the heel in the axilla, or by a counter-extending band passed around the upper portion of the humerus. The use of the heel is probably more free from the danger of the fracture of the humerus, but in either case this accident will rarely happen, where a proper amount of force is employed, except in old persons. If the counter-extending band is employed, the assistant should be instructed to make traction in a steady manner, and should thoroughly understand the object of the manipulation so as to change the line of traction at the proper moment. As the arm is carried out from the body, it may be gently rocked back and forth, to assist in breaking up adhesions, at the same time this manipulation may cause it to enter more readily into the rent in the capsule. It is, however, at the moment of extreme rotation outward, that the reduction will be found more often to take place. M. Revillout gives an account in the *Gazette des Hopitaux* of July 31,* of the mode employed by M. Panas, in the reduction of dislocations of the head of the bone forward. M. Panas believes that almost all these dislocations are produced by a rotation of the head of the humerus, and as the result of experiments, he has been able to demonstrate that by a movement of

*American Journal of Medical Science, October, 1875, p. 551.

rotation it is easy to lacerate a capsular ligament, which would resist a direct traction of six hundred kilogrammes. Once beyond the laceration of the capsule, the head of the bone, when carried inwards, lies supported on the inner lip of the laceration, and if reduction be attempted in this position, it is necessary to rupture the more or less broad ligamentous bridle which separates it from the glenoid cavity. When, however, the muscular resistance has been overcome by a sufficient extension, the rotation outwards brings the head to the middle of the rupture, and a slight movement suffices to throw it into place. This mode of M. Panas resembles almost exactly that employed by Dr. Miner in the reduction of the cases of sub-glenoid dislocation referred to in this paper. In a recent case, complicated by fracture of the forearm, the writer succeeded in restoring without difficulty a dislocation into the axilla where the employment of the heel in the axilla could not, from the nature of other injuries, be brought into requisition. Resembling, in its general principle, the methods of manipulation described by Dr. H. H. Smith, and others, its simplicity, and ease of application, makes this method worthy of trial by the profession.

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ART. II.—*Chorea or St. Vitus' Dance.* By Henry Nichell, M. D.

From December 30th, 1874, to September 8th, of the present year, I have had under my care four cases of St. Vitus' Dance, in which the subjoined combination has been prescribed, leading to a speedy recovery :

R

Strychnia Sulph.	gr. ss.
Acetic Acid, dilut.	q. s.
Pyrophosphate of Iron.	℥ iss
Cinnamon Water	℥ iij
Extr. Belladonna.	gr. ij
Syr. Orange peel	℥ j
Fowler's Solution	℥ iss.

M. Sig.—A teaspoonful three times daily after meals. (To be well shaken).

CASE I.—L. G., a girl eight years old, had the disease steady

for five weeks. The above remedy was taken for about three weeks, when she appeared entirely free from the malady.

CASE II.—C. S., a girl of the same age, had suffered from chorea for about two months; she had been attended by an experienced physician during that time, but as no benefit was derived from treatment, the attendant abstained from further advice in the case. After some time I was called, and ordered the above prescription. In the course of three weeks the child recovered.

CASE III.—C. W., a girl aged six years, had chorea for two weeks, when the same medicine was administered, resulting in recovery at the end of two weeks.

CASE IV.—G. E., a boy six years old, had suffered from a severe attack of articular rheumatism of most joints from the latter part of July up to August 9th, when I was summoned. The patient then had *Scarlatina Anginosa*: severe vomiting, profuse diarrhœa, and swelling of some of the joints were present. Soon afterward symptoms of *Cerebro-Spinal Meningitis* set in, and on the twentieth of August twitchings of the muscles of the face came on. Shortly afterward almost all the voluntary muscles were affected. Articulation was entirely abolished and deglutition was seriously interfered with. My friend, Dr. E. Tobie, met me in consultation on the twenty-first of August, and pronounced the case a very unfavorable one, since the mening-eal affection had not subsided, the abdomen being tympanitic and watery diarrhœa having again returned. After some days, however, the latter phenomena subsided. On the twenty-fourth of August I prescribed the mixture administered in the other cases of chorea, and in less than eight days the little patient had fully recovered.

As regards the composition of the remedy which I have used in these four cases, some one of its ingredients may probably be dispensed with—perhaps belladonna. But what I desire, is to call the attention of the profession to this combination (which, of course, must be modified and adapted to age, constitution, etc., of the patient), and to ask that it receive a fair trial in so troublesome a disease as Chorea.

MISCELLANEOUS.

"Unsuccessful Practitioners."

TO THE EDITOR OF THE MEDICAL RECORD.

MR. EDITOR:—In the struggle for existence somebody is always getting pushed to the wall. It always has been so, and doubtless will always continue to be so. Some of these unfortunates drop out of the crush quietly; others signify their discomfiture by loud wails and lamentations, like your correspondent "Diploma." It matters little in what particular line this struggle has been, whether literature, science, art, trade, commerce, or manufacture, the burden of the wail of unsuccessful men is nearly always the same, *viz.*, *that* particular calling is too crowded, and the great public too unappreciative; and those who have attained success have stumbled upon it, fallen into it, or been conducted to it by the wealth and influence of others. Unsuccessful men have ever modestly disclaimed any responsibility for their own failures.

Such being the case—and I believe you will concede the truth of my statements—I should not have taken upon myself to criticise the letter of your correspondent, did you not in your editorial upon the subject allude to it as "a very interesting, instructive, and suggestive letter," vouch for "the facts which he presents," favor holding the medical colleges to an accountability for overcrowding the profession, and inquire if "in the confusion of struggling multitudes, is there an even chance that the truly meritorious one will always succeed?"

Now, Mr. Editor, I am in no way personally connected with any of the medical colleges, nor interested in them save as institutions which have the training of our young men, and thus give character to our profession. On this account alone I cannot calmly bear to have them maligned.

Furthermore, I have always believed that honest and intelligent perseverance to *any legitimate* business will certainly bring success, unavoidable accidents alone excepted, of course. I believe it none the less firmly since reading "Diploma's" letter.

In the first place, *Is* the profession overcrowded? "Diploma" proves it to his own satisfaction, both by statistics and his own experience. But then, anything can be proved by statistics or by personal experience. Personal experience has time and again proved conclusively the existence of ghosts and hobgoblins, has time and again proved insurmountable obstacles in the path of success; yet the great mass of mankind still doubt the existence of the former, and are quite unmindful of the latter. Success still

comes to those who work for it, none the less than it did fifty or one hundred years ago.

That now and then a man fails to succeed in the practice of medicine proves nothing as to the vocation being overcrowded. For one, I do not believe in this alleged overcrowding, but, on the contrary, maintain that the profession offers excellent promise of a livelihood and more, to young men of perseverance and ability.

I do not say that they will obtain it in the way your correspondent has pursued. Upon his own showing, I think the responsibility for his failure can rest upon no one but himself. He had the best of advantages, and by all natural laws should have won in the battle for existence. But, with all the advantage which culture could give, on one occasion he was worsted by "a pair of pestilent, vulgar, and ill-educated quacks." Tell me of what advantage would it be to him to have the standard of medical education raised, when even the ill-educated quack has more *moral* control over patients than he?

Men have time and again tried vainly to legislate quackery out of existence—it is simply impossible. The educated physician has to compete with the ignorant and vulgar, always has had to, and probably always will, but who doubts the final issue? To argue anything but ultimate success, is to argue that the course of civilization is backward. So "Diploma's" few instances of successful ignorance may go for nothing. If I were disposed, I might cite numerous instances of honorable, intelligent, scientific men, who have attained success unaided during the time which "Diploma" has occupied in floundering, and, I fear, grumbling. In fact, "Diploma's" letter will be read by hundreds of men who will smile at what contradicts the lesson of their lives.

I believe as implicitly as "Diploma," or any one else, that the standard of medical education should be elevated, but not for his reasons. I do not believe that any course of study, either at Bellevue or anywhere else, can guarantee success to any man. Medical colleges may prepare a man for his battle, and the better they prepare him the better fight he may make if he will, but his success is always his own. It may be hastened or detained by wealth, and influence; but without either, if he have the energy of a full manhood, he may attain it. I believe that the law of supply and demand alone can regulate the number of men who shall practice medicine, and that medical colleges are just as subservient to that law as individuals, and have no more control over it than individuals. Then let them do their work. Encourage them to elevate their standard for the public good, and not attempt it for private gain.

Jeremiahs will wail, but the world moves, and meritorious men will succeed in the future as they have succeeded in the past.

I do not believe the professors of our colleges to be the men whom "Diploma" alleges. That many of them are honorable,

high-toned men, I know ; and the imputation that they graduate men merely for the money's sake is as base as it is groundless.

To sum them up, then, "Diploma" is a disappointed man. He graduated at a first-class literary college, then at Bellevue—served eighteen months in hospital—went abroad for a year—returned—wrote articles for the papers, on which he was "complimented by many of the older members of the profession," etc., etc., made a humiliating failure of his life—tells us all about it—and falls out of our ranks blaming everybody but himself, and warning everybody to beware of his example.

I will take up his warning, and admonish every young man studying medicine, about to study it, or just commencing to practice it, to beware of his example. Beware of his failure, and make your success certain. Do not rest with the knowledge that you have an education "much more extensive than that usually enjoyed by students," and therefore think that you must succeed ; but remember that with all his erudition he made a failure, while less trained men, by untiring energy and honest endeavor, have elevated themselves to places of honor and emolument.—SUCCESS.
—*Medical Record*.

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Treatment of Fractures by means of the Plaster-of-Paris Bandage.

The results obtained by the use of plaster of Paris as an immoveable dressing in cases of fracture of the extremities place it in advance of any of the other dressings of its class. The main disadvantage is its weight ; but this is more than compensated for by the readiness with which it may be applied, the quickness with which it solidifies, and its relative strength. It is the intention of the present article to furnish those who have not had the opportunity to learn its use, with the ordinary method of its application as practiced in the New York hospitals, so that they may obtain results equal to those that are there obtained. Differences of opinion exists as to whether it is advisable to put up fractures immediately or not, but the majority of conservative surgeons believe that the immediate method exposes the patient to too much risk of sloughing, and possible gangrene. This is particularly true in those cases in which the patient is not under the immediate observation of the surgeon. As a rule, therefore, it is safest and best to allow the limb to rest for a few days, or even a week, so that the swelling shall cease to advance and begin to recede before placing it in plaster. It will be found also that, in a day or two after the fracture has been put in plaster, it will be necessary to cut the plaster down anteriorly by means of a sharp knife. If the splint is then loose, from the further subsidence of the

swelling, the sides of it may be brought close to the limb by means of an ordinary roller bandage. When the swelling has been pretty thoroughly reduced, the surgeon will be enabled to put the fracture up permanently. Another advantage in inspecting the fracture, particularly if it is of the tibia, is, that a projecting fragment of bone may press against the splint, and in a day or two cause an abrasion, which, if not attended to, by forming a fenestra, would result eventually in a compound fracture.

In order that the subject may be made as clear as possible, it is advisable to divide the consideration of the matter into the following steps:

The Preparation of the Bandage.

Its Mode of Application.

The Means of applying it in Special Fractures.

The Modification that must be practiced in Compound and some Varieties of Simple Fractures.

Its Removal.

The Preparation of the Bandage.—It was formerly, and by many is now the custom to use an ordinary roller-bandage of unbleached muslin as the basis upon which to spread the dry plaster of Paris. Latterly, a marked improvement upon this has been introduced in the shape of a gauze bandage having about twenty threads to the inch. This gauze is used by dress-makers as a stiffening for ladies' dresses, and the only precaution to bear in mind is to get the variety which has not been stiffened with starch. When this bandage has been obtained, it is evenly spread over with plaster of Paris to the depth of a line. The bandage is then rolled very loosely up, for a reason that will appear in the next step.

The Mode of Application.—The fracture is first reduced, and the limb is then covered from the extremity with either a layer of cotton-wool, a piece of old blanket, or in fractures of the leg with a long, woollen stocking. The bandage is then soaked in water till it is thoroughly wet, and the time required for this depends mainly upon the lightness with which the bandage is rolled up after being covered with plaster. In the case of the gauze bandage referred to, two minutes will be sufficient, but other varieties may take longer. The limb being thus enveloped with a dry dressing as directed, the wet plaster bandage is commenced at the toes in the lower, and at the palm of the hand in the upper extremities, and carried as far up as may be necessary to go. The thickness of the plaster-dressing will vary with each individual case, but the average is about three folds of the bandage.

Its Application in Special Fractures; Fractures of the Tibia and Fibula.—It is only in exceptional cases that extension is required in putting up fractures of the leg. The bandage is commenced at the toes and carried up as far as the head of the tibia, and any deformity that has occurred during the manipulation is

rectified before the plaster hardens. In exceptional cases, such as fracture of both bones of the leg, extension is required, and to a novice this presents a serious difficulty. It has been met, however, by a device of Dr. Bates, house-surgeon at Bellevue Hospital, and consists in placing one strip of adhesive plaster around the instep, and another around the heel, so arranged that a cord can be attached to the ends of the adhesive plaster, by which extension can be applied. After the requisite amount of extension has been obtained, the plaster of Paris dressing is applied in the manner previously directed; and when it has sufficiently hardened, the ends of the protruding adhesive plaster can be cut off, leaving extension and counter-extension fully maintained by the plaster of Paris.

Fractures of the Patella.—Fractures of the patella are treated in two ways: Either the fragments of the patella may be approximated as near as possible by means of adhesive plaster, and then the plaster of Paris bandage may be carried from the toes up to the groin, so as to keep the limb immovable; or the following method may be adopted, which allows of the continual observation of the position of the fragments: A plaster of Paris bandage is carried from the toes up to the lower fragment of the patella, and a similar bandage is carried from the upper fragment to the upper third of the thigh. In the putting on of either bandage, a fold of strong wire is interwoven so as to leave a loop projecting like a buckle immediately over each fragment of the fractured patella, and as soon as the dressing is sufficiently hard, the fragments of the patella are approximated as near as possible by a piece of strong cord passing between the projecting loops or buckles of wire. In order to obtain the best possible result, a wooden posterior splint should be applied to keep the limb perfectly immovable.

Fractures of the Femur.—In fractures of the femur differences of opinion exist as to the propriety of placing all cases in plaster, but, if it is considered advisable, the method is to obtain first of all satisfactory extension and counter-extension, and for this purpose different methods have been practiced. The most convenient for those who have a limited *armamentarium*, is to secure counter-extension by placing a sheet around the body beneath the arms, and securing it to some reliable support. Extension is obtained by carrying a wide strip of adhesive plaster along either side of the leg and attaching it by means of a cord to the pulleys used in reducing dislocations of the hip. When extension and counter-extension have been thus obtained, the limb is covered with a fold of old blanket properly fitted, and the plaster then carried up from the toes to the perinæum, then over and around the pelvis so as to render the extremity perfectly immovable. It is necessary to administer an anæsthetic to obtain complete muscular relaxation.—*New York Medical Journal.*

Enteric Fever and Milk Supply.

Dr. E. Duncan had prepared a careful report on the recent epidemic of enteric fever in Crosshill and Eaglesham. He commences by explaining, in terms which can be generally understood and appreciated by the non-professional portion of the public, how this disease may be spread; one of his main objects being to remove the general ignorance prevailing on this subject, in the hope that, by so doing, the public may exhibit more interest in sanitary questions. Dr. Duncan at the onset expresses the conviction that enteric fever does not arise *de novo*, and that the cases in which the disease does appear to originate simply from the inhalation of decomposing animal matter, are really instances in which the poison has been communicated by some article of food; a method of infection illustrated by his report. The outbreak in question commenced in the month of January last, in Crosshill, near Glasgow. It appeared to die out after the middle of February, but recurred with renewed violence after that date, about 280 cases occurring up to the end of March, in a population not exceeding 14,000. The inquiry into the means by which the disease was spread appears to have been conducted by a process of exclusion, the various conditions favoring such spread being considered separately. The nature of the soil is first dealt with, reference being made to Prof. von Pettenkofer's views on this subject; but consideration of this subject led the writer to conclude that the soil had no connection either with the origin or the spread of the fever. The prevailing atmospheric conditions are next briefly adverted to, and also set aside. The various conditions of sewerage and drainage are dwelt with at some length; and although defects were found, as might have been expected, yet, in many of the houses where the disease appeared, some of those defects which are so much associated with the spread of this disease were absent, and in other houses, which were not affected, grave defects were discovered. In short, it is evident from Dr. Duncan's description, that the epidemic was not caused by defects of sewerage, although it was probably to some extent propagated by them. With regard to the water supply, it does not appear to have been at fault; and it is specially pointed out by Dr. Duncan that although the water supply is an intermittent one, yet, since the water closets are in every case supplied by means of a cistern, such pollution of water as arose at Cains College and at Lewes cannot have taken place. The pollution to which water may be subjected in the mains is, however, by no means limited to suction of foul matters from closet-pans in the manner in which it occurred at the two places named. Foul and even excrementitious matters can be drawn into the mains from the soil which they traverse, wherever there is a cracked or faulty pipe, and the supply is an intermitting one; the filth being

taken up by the water, or deposited in the house cistern; and we have but little doubt that some of the deposit in our London cisterns reaches the mains in this way. It does not, however, appear that any such mishap caused the epidemic under discussion, there being an absence of any evidence implicating the water supply. Finally, Dr. Duncan considers the question of the milk supply. This subject is examined at considerable length, and the result of the investigation tends in the strongest manner to show that the disease was spread through the agency of this article of diet. Enteric fever has prevailed for some time in a certain district whence a considerable portion of the milk supply was derived, and it had attacked the families of farmers whose milk was conveyed to the affected locality. Indeed, out of a total of 262 families receiving milk from what we may now term from the suspected dairies, 94 were attacked with enteric fever; whereas, out of 242 families receiving other milk supplies, only 18 were affected, and of these 18 families it was ascertained, on subsequent inquiry, that 10 got occasional supplies from the suspected dairies. With regard to the remainder of these exceptional cases, it is only a matter of surprise that the number was so small, in view of the large area over which the epidemic was spread.

With regard to the method in which the milk of the various farmers became infected, we cannot now follow Dr. Duncan throughout the many details with which he deals; but one example is worth recording. In November last, enteric fever attacked the family of a dairyman at Eaglesham. On his premises was a dung-stead which partly drained towards and into two wells, the contents of which were used for the dairy and farm purposes, and which were also drunk by persons residing in a back row. In December, the residents of this row were attacked with enteric fever, the stools of as many as twenty patients being thrown into adjoining privies. Constant soakage must have taken place from the privies towards and into a streamlet close by; but just at this date the privy contents were frozen up and the soakage was thus stayed for five weeks, at the end of which time a thaw ensued, rain came on, and the accumulated contents of the now specifically diseased privies soaked and drained towards the stream. This water course, which also receives some of the drainage from the dung-stead above referred to, formed the principle source of water for another dairy farm; and, following on this thaw, both the farmer's family and the persons residing within the area of the distribution of his milk became affected with enteric fever. This indicates very clearly the wisdom and propriety of a sanitary survey of farms from which a town milk supply is drawn; such, for instance, as is regularly instituted by the Aylesbury Dairy Company for all its farms.

The whole history of this epidemic has been carefully worked out by Dr. Duncan, and a perusal of his report will repay those

who are interested in such investigations. His views concerning the spread of this outbreak are also confirmed by the opinion of Dr. Littlejohn, who promises a further report on the subject, but who has already, as the result of an inquiry made on behalf of the Board of Supervision, expressed his conviction that the importation of the disease into the affected district had been conclusively traced to the use of an infected milk supply.—*British Med. Jour.*, July 10, 1875.—*Monthly Abstract*.

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Treatment of Chronic Cystitis.

In the course of some remarks made before the Kings Co. Medical Society, by Dr. J. W. S. Gouley, of New York, on the treatment of chronic cystitis, the doctor said that the disease is usually the consequence of some pre-existing trouble—such as may cause certain alterations of the urinary secretion—such as a foreign body in the bladder, a morbid growth, or an obstruction in the urethra. He had seen cases of chronic cystitis in middle-aged men, which could be traced to no other cause than persistent lithuria; the patients having for months, and even for years before, passed, almost daily, large quantities of crystals or agglomerations of crystals of uric acid, with great frequency of urination, vesical tenesmus, and “burning, cutting” pain along the urethral canal, the urine containing, besides, a variable quantity of pus, and sometimes of blood. This, he said, occurs most frequently among dyspeptics, and such cases of cystitis might properly be called diathetic. When this condition is discovered early, the consequent troubles can generally be averted by properly directed treatment. He recommended alteratives, laxatives, mineral acids as tonics, followed in a few days by milk alkaline waters, and then the Friedrichshalle, or the Hungarian bitter water, proper hygienic management, etc., and related illustrative cases.

In cervical cystitis with inordinate irritability he strongly advocated instillations of nitrate of silver solution, after the plan of Doctor Félix Guyon, of Paris.

The doctor spoke of the cystitis which occurs from excessive use of opium, and advised caution in the administration of this drug to patients already suffering from cystitis.

He also referred to a cervical cystitis, lasting for months, with frequent discharges of slightly purulent urine, often caused by the passage of large sounds in the treatment of urethral strictures. In these cases there is pain after urination, similar to that which occurs in anal fissure after defecation. He asked whether these were not probably instances of pre-existing contracture of the vesical neck, whose mucous membrane has been actually fissured by the distending sound? Should this supposition be correct,

would it not be proper to subject the more obstinate cases to the same sort of treatment as are cases of anal fissure? Anal fissure is frequently known to yield very speedily to divulsion of the sphincter, and it is more than probable that fissure of the vesical neck will, in many instances, yield to divulsion of the vesical neck. Divulsion of the urethro-vesical orifice can be made, among other means, by introducing *per urethram* a soft rubber tube capable of being distended, by water or air, to a given size and at a particular point. He has never resorted to internal incision for contracture of the vesical neck, as advised by the French. In some cases of chronic cystitis, from narrow intractable strictures, he has established free temporary drainage of the bladder, by first making external perineal urethrotomy, and then dilating the neck of the bladder by introducing the index finger. This has usually given excellent results. In only one case of cystitis from stricture has he made free incision of the neck of bladder, and this patient died.

In far advanced cases of cystitis, where the whole organ is implicated, and where there is concentric hypertrophy with diminished capacity, but where there is no reason to think that the kidneys are hopelessly involved, he advocated cystotomy, such as that recommended by Dr. Parker, of New York; but with the understanding that the cut shall be kept permanently open in order that the bladder may be constantly drained. He thought there could be no objection to this on the score of the inconvenience it might give the patient, since, in most cases that are likely to require the operation, no urine can be retained, and the patient may already be wearing a urinal to keep his garments dry—the bladder having ceased to act as a reservoir for the urine. The doctor stated that he had once succeeded in establishing such permanent drainage of the bladder. The operation was done three years ago, and the patient, who was before very feeble and emaciated, is now well and stout, and the only inconvenience he suffers is getting wet when his urinal is out of order.

He thought that the treatment of chronic cystitis should be in accord with the peculiarities of each case, and with the degree and cause of the disease, and that much judgment and experience are necessary to determine what should be done. While most cases are manageable by irrigations, etc., some are at first greatly damaged by this treatment, and require weeks of preparation by rest, diluents, balsamics, tonics, ice in the rectum, fomentations, hip-baths, rectal suppositories of belladonna and opium, etc. In the majority of instances the treatment should be constitutional as well as topical. The doctor enumerated the various causes of cystitis, and gave a brief outline of the treatment appropriate to each form.

In conclusion, he called attention to the importance of early treatment of the cystitis which so frequently follows injury or disease of the spinal cord, and said that for the past ten years it has

been his practice, in injuries of the back, followed by paraplegia and paralysis of the bladder, not only to draw off the stagnant urine, but from the very first to frequently irrigate the bladder, twice and even thrice daily. This always gives ease and comfort to the patient, and often has much to do with the favorable termination of the case.—*Medical Record*.

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Chloralism.

The Chemist and Druggist quotes from *Belgravia* for April, extracts from "The Confessions of an English Chloral Eater, written by Dr. Gordon Stables, of the Royal Navy. The narrative is not apparently intended for fiction, though evidently written with that tint of extravagance which was requisite to make it a popular magazine article. The following passages are quoted from the history, as well calculated to check the too easy reliance on the innocence of the medicine which early reports of its action were calculated to engender:

"The stimulation," says the doctor, "is not like that caused by opium or alcohol: it is not exhilarating, and does not incite to action either mentally or bodily. But the subject of the influence rises for a time above all his cares, or sorrows, or fatigue, and seems to look on life through the medium of a rose-tinted glass. But while care and sorrow are forgotten, and a strange dreamy sense of perfect ease, comfort, and happiness takes their place, all affection and love are likewise banished. He is apathetic, and cares for nothing save his own sense of comfort. He is, if I might so express it, merely a living, breathing vegetable. In this state the confirmed chloral eater would stand by the death-bed of his nearest and dearest a passive spectator, if not indeed actually smiling; and for the same reason he would stand quietly on the scaffold until executed. If the dose is repeated without the chloralist lying down, speech becomes indistinct, the eyelids drop, and the gait in walking is affected, just as in drunkenness from alcohol. The chloralist drunk in the first degree, is by no means an unpleasant companion. A stranger could mark nothing unusual about him; he is genial, and although rather languid and by no means bright in conversation, he is at all events a good listener, and is easily pleased, although his smiles often partake of the simpering or hysterical order; and, too, he is at times easily roused into an outbreak of furious passion, which dies away just as suddenly as it came, leaving no trace behind. But of course every one will not be effected precisely alike, as much depends on the idiosyncrasy or innate peculiarities of the chloralist."

The writer's personal experience with chloral commenced in December, 1871. He was suffering from sleeplessness, and, tempted

by the medical praises of the new hypnotic, he began with doses of 20 grains. The "sweet restorer" answered promptly this enchanted call, and the patient, delighted with the power with which he found himself possessed, continued to use it. Very strikingly he described the nature of the sleep which he could thus produce. "I observed," he says, "that on awakening in the morning I felt as if actually no space of time had intervened since I lay down. My life seemed a continuous never-ending day; I had no satisfaction from my sleep, and felt dispirited in consequence. If I had only taken warning now! But I did not; for this same peevishness is the earliest symptom of that coming irritability, or chronic congestion of the brain, which the continuous use of chloral never fails to produce. About two months after I had begun taking chloral, I first became sensible of a strange heat on the top of my head, together with a sense of fulness in the head. My nerves, too, began to be shaken. I could do things slowly, but any hurry or excitement at once confused me."

All this time, he says, he had no suspicion that it was the hydrate of chloral that was doing the mischief, and was treating himself for brain congestion. Things grew rapidly worse, till at the end of June, 1872, he writes:

"My bodily sufferings are very great, and my mind is a mere chaos. My face is so thin and white and worn, that I start at my own image in the glass. My eyes are constantly dilated, and the least excitement runs my pulse from sixty to a hundred. Towards evening my head feels as if frozen, and I sit in a benumbed stupor until bed-time. Undressing I feel as one of the labors of Hercules, and has to be done by degrees. I do not take my chloral—three drachms, enough to kill as many men—until I am in bed, and the house is perfectly still; for the slightest noise would necessitate a double dose. When all is quiet, I drink and

"If I were not writing these confessions as a warning to others, I would draw a veil over my last experiences of chloral hydrate. For the first fortnight in December never less than five drachms of this medicine was my nightly dose. From the time I arose in the morning—for I still left bed daily, having a horror of it—my sufferings were extreme. I had now lost all power of reading, writing, or speaking aloud; any attempt to do either was excruciating brain agony, and if persevered in, fainting followed. I could hardly move my head from the pillow or sit erect, while my eyes seemed starting from their sockets if I attempted to walk. But towards night—well, if all of mental, all of bodily suffering I ever endured in life could be compressed into one hour, it would not exceed the torments I then underwent. Every vein in my body seemed swollen to double the size and inflamed along the whole length, while the restlessness was so distressing that I could not lie for five minutes in any one position. Add to this that time

seemed indefinitely long—minutes as hours and hours as days—and you will have some faint notion of my experience of the ‘grand new remedy for sleeplessness that had no after-effects.’”

From the time of totally abandoning the use of the poison, however, he began to mend, though his recovery, he tells us, was a long and tedious one. Doubtless Dr. Stables’ object is to warn his readers against indulging in chloral at their own discretion, not absolutely to condemn it when administered under medical direction.—*New Remedies.*

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MR. TEALE’S CASE OF HIGH TEMPERATURE.—Although five months have elapsed since notes of a remarkable case of high temperature were read before the Clinical Society by Mr. Teale, (see July issue of this Journal, page 320), yet the case was in itself so subversive of all current ideas on the subject that we doubt not it is still fresh in the memory of our readers. With commendable candour the author of that paper has just addressed a letter to a contemporary in which he replies *seriatim* to several very natural queries that have been put to him concerning the facts of the case, and the possibilities of any artificial means within reach of the patient of raising the index of the thermometer. From this it would appear that observations were taken in mouth and rectum as well as in the axillæ, with the result of showing the same high level (110° to 120°); that the rise in the thermometer was sometimes noticed at the time: that no hot bottles or blankets were in contact with the patient by which she could have artificially warmed the thermometer; and that the instruments used had been tested and found correct, and had during the recovery of the patient registered normal as well as abnormal temperatures. As we ventured at the time to question the possibility of the maintenance of life at such a high rate of temperature (unaccompanied as it was by any extreme variation in pulse and respiration frequency), so we do now cheerfully accept Mr. Teale’s further explanations, which seem to leave nothing to be desired in testimony of the faithfulness and accuracy of the record; while at the same time it leaves the *modus operandi* in as mysterious a condition as ever, and goes far to expand our hitherto too narrow notions. Exceptional and full of mystery the case must remain, and that another of like nature will occur is to be hoped, lest we may have to consign it to that limbo of “exceptions” which go to prove the rule, the rule in this instance being the incompatibility of animal life with a body heat of 120°.—*Lancet*, July 17, 1875.—*Monthly Abstract.*

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DURATION OF BLOODLESS OPERATIONS.—At a recent meeting of the fourth Congress of the German Surgical Society, Professor

Langenbeck stated his opinion that it was of extreme importance to determine more accurately than has as yet been done how long a limb can be deprived of blood, during a bloodless operation, without danger either to it or to the patient. He thought that the constriction could be kept up for a very long time without fear of gangrene, if the patient could only overcome the disagreeable sensation which the bandage caused. We, however, particularly need experiments on animals, to determine the exact limit of safety. In long operations on the bones—for example, resections—we can see that the bloodlessness is not complete in them as in the soft parts around, and that capillary bleeding occurs from them when not a drop of blood issues from the muscles. Prof. Langenbeck continued: “I have recently kept up the constriction in excisions of the ankle joint for an hour and a half, without any ill effects. After this operation I always find a plaster-of-Paris bandage the most comfortable and useful dressing; but till lately there was one great disadvantage attending its use—namely, that it became soaked with blood as soon as it was put on. In the last two cases in which I have operated, I have kept up the compression until the bandage was perfectly hard, and then cut large openings in it so that the whole wound could be seen, and only then removed the constriction. The abundant hemorrhage which now occurs from the vessels of the periosteum and the bone soon stops, if the femoral artery is compress for a short time; with a little care the blood can thus be kept from the soaking into the bandage,”—*Med. Times and Gaz*, July 31, 1875.—*Monthly Abstract*.

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POISONING BY CAMPHOR.—Nine well-authenticated cases of poisoning by the homœopathic solution of camphor have been published from time to time in the *British Medical Journal*. This solution contains about a grain of camphor to every two drops, and in doses of fifteen drops and upwards it acts as a strong poison. Some doubt having been expressed by a physician whether camphor was really the cause of the symptoms in the cases reported, from the fact that he had taken the drug in three-grain doses, with no other than a beneficial effect, the *British Medical Journal* replies: “It is a well-known fact that the action of a poison is, *cæteris paribus*, in direct proportion to its solubility. Camphor being very insoluble in the fluids of the canal when given in the form of a dry solid, is in great part eliminated without being absorbed, and has little medicinal or poisonous effect; but when taken in the form of a spirituous solution it is much more readily absorbed, and is, in a corresponding degree, more active.”—*New Remedies*.

Correspondence.

Editors Buffalo Medical and Surgical Journal:

GENTLEMEN—I desire to call your attention, and through you the attention of the profession, to a matter of interest in *Life Insurance*. Life insurance agents are often applying to physicians for certificates of the good health of patients.

This is one of the most delicate and dangerous procedures for a physician, and I desire hereby to dissuade all physicians from ever doing anything of the sort, unless employed by the company in a manner wholly independent of agent and patient. The knowledge a physician has of his patient is the most valuable an insurance company *can* possess—worth ten times as much as what they can possibly obtain through any physical examination by their examining surgeon. It is not over safe for an attending physician to tell what he knows of history and habits, and I have in my life by so doing lost the patronage of one of the best paying families in the city.

Life insurance companies are mean and small enough to ask this without in any way offering compensation; and my brief but earnest advice is, never make out family physician's certificate for patient or agent. If you consent to do it at all, do it unbeknown to patient or agent, for the company, and in consideration of adequate compensation.

Yours very truly,

ONE WHO KNOWS.

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Editorial.

Unsuccessful Practitioners.

We copy elsewhere a reply to "Diploma," whose lament we published in our last month's issue. The letter was so suggestive in some of its details that we could not resist the temptation to copy it in full, notwithstanding its length; and the reply is so much to the point, in some respects, that we feel bound to give it also.

Starting with advantages possessed by but few young men, we must accept "Diploma's" qualifications as being above the average of young physi-

cians. Having acquired his education and secured the charge of the surgical class at a large dispensary, he settles down in the metropolis and awaits practice. We may presume that the surgical class at the dispensary was secured to occupy spare time and afford opportunity for study and investigation. Of course, but few will be inclined for a moment to suppose that any idea of the advantages of this position as an advertising medium suggested itself to the mind of "Diploma." Yet, as he calls the Code of Ethics "absurd," we presume he did not object to his name appearing in the public prints in connection with the advertisement of said dispensary, as having charge of the *Surgical* department. In fact, we may presume that his own and the names of his colleagues were obligingly inserted in the local column occasionally, with their several departments specified, in order that the needy *poor* might not, through ignorance, suppose that Dr. A—— was devoted to Surgery, when that department was occupied by Dr. B——, Dr. A—— being in charge of the department of Gynæcology.

Sad to relate, "Diploma" did not succeed in the metropolis, and we can, in a measure, imagine his feelings when he gazed up the record of a year's work, charges against two patients, "from neither of whom had anything been collected." The lesson was doubtless a hard one, but it taught him that the crowded walks of city professional life contained no room, except in rare instances, for a beginner in the practice of medicine. A strange fascination, a wish for easy practice, or a desire to be near the centre of busy life, seems to draw young medical men into our large cities. In a few instances they gain a scant living for a few years, and gradually grow into a larger practice; but for one who succeeds in city life there are two who fail and who seek practice in other and less crowded fields. If they choose right and are possessed of business faculties, which are necessary to success in any business, they succeed; if not, they fail, and either seek other fields or fall into some other calling.

There seems to have been something lacking in "Diploma's" case. Although he was possessed of an excellent education, and was not disposed to coquette with his business, he easily loses that which he has gained in the new quarter to which he moves, and when a *rubbing* doctor and his wife step in to claim a portion of practice, he throws up his hands in despair because the leading minister in town patronizes the quack. Poor "Diploma" has spent so many of his years in colleges, hospitals and German laboratories, that he has failed to obtain that knowledge of the world and that insight into the character of the majority of its inhabitants, so necessary to successfully cope with the vanities and vexations of life. We could show him a town, not a hundred miles from where we are now sitting, whose leading men, aye, and intelligent ones, too, resort to just such "pestilent, vulgar, and ill-educated quacks" as those to whom he refers; but the physicians are not discouraged thereby, but expect to treat those same people in due time, when the quacks have bled their purses to their satisfaction. Certainly, if the rubbing doctor cured the "valetudinarians of all the churches," "Diploma" has only himself to blame for not doing as well. The lamenting

Jeremiah is condemned out of his own mouth when he tells us that \$400 represented payments from one-fifth of his patients, the remaining four-fifths being still his debtors, though most of them were fully able to pay him. If he conducts his mercantile business which he intends to seek on that principle, he will make a failure of that as well. If he had learned some of the business capacity of his neighbor, who could not read his own diploma, but who doubtless succeeded in getting practice, the sad lament would never have been uttered; he would have left the crowded "Beeler's quarters," and sought some country village where the call was urgent for a good doctor—one who knew his business (and many such places exist)—and there, although the society might not have been as congenial, nor the practice as easy, success would have attended his earnest, well directed endeavor.

We cannot but admit that in the crowd of young men who are annually sent out from our medical colleges many incompetent physicians exist, but we are not disposed to view the matter in as dark a light as "Diploma" places it, not to impute the sordid motives to the teachers in our medical schools that he charges them with, and the many important and valuable contributions which American physicians have made to medical science seems to contradict the assertion which is so often made by jealous or disappointed men, that American medical education is a farce. If the very men who cry out against the system, and who, like the Pharisees, thank God that they are not as other men are, were to lament less at the exceeding weakness of the system, and do more to build up its strong points, there would be less cause for complaint. But as long as College Faculties exist, so long will there be men in the ranks of the profession envious of the supposed advantages attending membership of those bodies.

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Books Reviewed.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. von Ziemssen. Vol. X. *Diseases of the Female Sexual Organs.* By Prof. Carl Schröder. American Translation. Edited by Albert Buck, M. D. New York: Wm. Wood & Co. 1875.

In compliance with the plan pursued by the publishers of the German edition of this work, Messrs. Wood & Co. have issued volume ten prior to the publication of volume four. Devoted to a subject which in the last few years has been recognized as a large and important field of special practice, it will attract as much attention as any volume of the series.

The entire volume is from the pen of Prof. Schröder, who is already well known to American readers through his excellent manual of midwifery.

The introductory pages are devoted to a description of the proper methods of making vaginal examinations. In these he describes some of the more common

and valuable specula, and expresses his preference in ordinary examinations for the tubular variety. In operations he employs the one invented by Simon, which is something after the general plan of Sim's.

He passes from the subject of examinations to that of diseases and malformations of the uterus. The malformations of that organ are briefly discussed and are illustrated by well-made wood-cuts of the more important varieties. The subjects of atresia, hypertrophys, atrophy and inflammations follow next in order. The consideration of the varieties of erosions and ulcers will be found to be particularly interesting, as it is this class of disorders which is more generally met with in every-day practice. The various forms of displacements and their treatment follow next in order. The mechanical treatment is recommended, and various pessaries and supporters figured which may be employed. In prolapse the author does not speak with much confidence of the operation for narrowing the vagina, which has at various times been recommended. The success of American surgeons in reducing old inversions of the uterus is recognized, and brief mention made of the success of Prof. White, of this city, and the instrument employed by him. Uterine fibroids and cancer are well described, several pages being devoted to their consideration; following these subjects are a few pages only, on the important subject of menstruation. A little over nine pages are allotted to the diseases of the fallopian tubes, and then follows a consideration of the diseases of the ovary. Malformations, inflammations and displacements of that organ are first considered, after which the subjects of cysts and cystomata are taken up.

Schröder recognizes two distinct varieties of cystic formation, dropsy of the Graafian follicle and the cystic tumor or cystoma. The dropsy of the Graafian follicle he regards as representing the retention cyst found in other glandular localities, while the cystoma is a new formation with a cystic formation arising from the follicles of the ovary. In the history of the operation, due credit is given to Dr Ephraim McDowell, of Kentucky, as the first to perform this operation in a rational manner and for a definite purpose. The author favors the extra-peritoneal treatment of the pedicle by means of the clamp. He says that the method of ovariectomy by enucleation, as first described by Dr. Miner, of Buffalo, "deserves careful investigation," and gives a list of several surgeons who have used the method with success. In case the pedicle is short, he recommends that it be tied in several portions with catgut, the ligatures cut short and the stump returned to the abdominal cavity.

The balance of the work is taken up by a consideration of diseases of the uterine ligaments, adjacent portions of the peritoneum, and diseases of the vagina and vulva.

The work is well translated, and presents to English readers an admirable resume of the present status of Gynecology, perhaps more especially from a German standpoint, but in most respects, a slight modification will adapt it to American ideas.

Vision: Its Optical Defects and the Adaption of Spectacles. By C. S. Fenner, M. D. Philadelphia: Lindsay & Blackiston, 1875.

The work under consideration seems to have been written with a view to its adaptation to the general as well as to the medical reader. It will, therefore, not be expected to take as high a scientific standpoint as it would if intended solely for specialists in this department. The volume is divided into three parts: I. Physical Optics; II. Physiological; III. Errors of Refraction and Defects of Accommodation. An appendix gives instruction for the adaptation of spectacles. Selections from the Test Types of Snellen & Taeger are included in the work. The pages devoted to physical optics are an addition of great value to a work of this character, for an understanding of this department of physics is essential to a knowledge of what follows in the work. The eye as an optical instrument is well explained, and is a fair exposition of what we know concerning vision. The third section of the work is, perhaps, the most interesting to students of diseases of the eye, although the first two sections should by no means be neglected. In this section is included a description, illustrated by wood-cuts, of several of the most recent methods of determining the presence of astigmatism. Dr. Risley's method, by means of the *visnometer*, is probably the most recent of these. He places the far point at from ten to twelve inches, and hence it is necessary to have the accommodation thoroughly paralyzed in each case examined. Even then it would seem that errors might arise, owing to the proximity of the test to the eye. A full description of Dr. Risley's instrument, with illustrative cases, is given in the *American Journal of Medical Sciences* for October, 1875.

But little account is made in this section of errors of accommodation, almost the entire attention being given to errors of refraction.

The author seems to be at home in the consideration of his subjects, and any of the few defects which may be noticed will readily be excused by the accident of retinal hemorrhage which befel him during the preparation of the work. The work seems in every regard worthy of the careful consideration of the profession.

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Life Insurance Companies and Physicians.

We would call the attention of our readers to a note, published elsewhere, which presents in a concise manner in some very good advice in reference to the subject of the certificates of family physicians for Life Insurance Companies.

The officers of many of these companies seem to think that physicians have nothing to do but fill out certificates for them. Only a day or two since we were conversing with a prominent physician upon this subject. He informed us that he was almost daily in receipt of letters from companies asking as to the capabilities of some doctor whom they were about to appoint Examining Surgeon, and that it often took a large amount of valuable time to investigate and answer

the letter as it should be. Still these companies never think of offering any fee, and some do not even condescend to send a stamp for the reply. Such requests should be consigned to the waste-paper basket.

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Books and Pamphlets Received.

The Cholera Epidemic of 1873, in the United States. Reports. Prepared the Direction of the Surgeon General. By Ely McClellan, M. D., John C. Peters, M. D., John S. Billings, M. D., and John M. Woodworth, M. D. Washington, Government Printing Office, 1875.

Annual Report of the Supervising Surgeon of the Marine Hospital Service of the United States, for the Fiscal Year 1874. Washington, Government Printing Office, 1874.

• A Treatise on Human Physiology; Designed for the Use of Students and Practitioners of Medicine. By John C. Dalton, M. D. Sixth Edition, Revised and Enlarged. Philadelphia: Henry C. Lea, 1875 Buffalo: T. Butler & Son.

On Poisons in Relation to Medical Jurisprudence and Medicine. By Alfred Swaine Taylor, M. D., F. R. S. Third American from the Third English Edition. Philadelphia: Henry C. Lea, 1875. Buffalo: T. Butler & Son.

Lectures on Syphilis and on some Forms of Local Disease, Affecting Principally the Organs of Generation. Henry Lee, Professor of Surgery at the Royal College of Surgeons of England. Philadelphia: Henry C. Lea, 1875. Buffalo: T. Butler & Son.

A Manual of Minor Surgery and Bandaging. By Christopher Heath, F. R. C. S. Fifth Edition. Philadelphia: Lindsay & Blakiston, 1875. Buffalo: T. Butler & Son.

The Physicians Visiting List for 1876. Philadelphia: Lindsay & Blakiston.

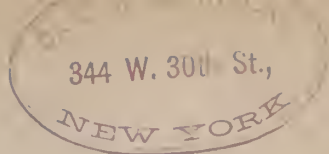
The Mucous Membrane of the Uterus, with Special Reference to the Development and Structure of the Decidua. By Geo. J. Engelman, A. M., M. D. New York: Wm. Wood & Co., 1875. Buffalo: H. H. Otis.

Clinical Lectures and Essays. By Sir James Paget, Bart. Edited by Howard Marsh, F. R. C. S. New York: D. Appleton & Co., 1875. Buffalo: Herger & Ulbrich.

On Paralysis from Brain Disease in its Common Forms. By H. Charlton Bastian, M. A., M. D. New York: D. Appleton & Co., 1875. Buffalo: Herger & Ulbrich.

• A Report on a Plan for Transporting Wounded Soldiers by Railway in Time of War. By George A. Otis, Asst. Surg., U. S. Army, Washington; Surgeon General's Office, 1875.

Transactions of the Medical Society of the District of Columbia for July and October, 1875.



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Original Communications.

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ART. 1.—*Abstract of the Introductory Address delivered at the Buffalo Medical College, Wednesday Evening, Nov. 3, 1875.* By Prof. E. V. STODDARD, M. D.

GENTLEMEN :—The pleasant duty of welcoming another class to the Buffalo Medical College has devolved upon me.

To those who have for the first time entered these halls, as students, as well as to those who have, at a previous session, filled these seats, in behalf of the Faculty, I extend a cordial welcome, coupled with the hope that the present may prove the commencement of a long and prosperous career.

You expect at this time some words of counsel, some practical suggestions, which not only may stand as guides in your labors here, but shall serve as a basis of action in the future as well. It has seemed to me that, in any work, a full understanding of its character and bearings is necessary to success in its pursuit; and influenced by this view, I have thought it best to invite your attention to the character of the Medical Science of to-day, its past and present relations, and your own relations to the studies in which you are engaged.

There are periods in the experience of the individual when it is well for him to review his progress, to consider his successes and

his failures in the past, and his present relation to his surroundings. What is true of the individual is also true of a profession. And it is well that, at times, its members look back over its past, and study carefully its present status. To those about entering it, such a review is of special importance and value, for its two great problems of absorbing interest of to-day are to know what point we have reached, and whither we are tending. * *

One of the greatest hindrances to the progress of our science has been a blind deference to so-called *authority*. In its early history, when knowledge was confined to a comparatively limited number, this was almost inevitable; but even in more modern times this same spirit has prevailed. For nearly thirteen centuries the teachers of anatomy propagated the error, taught by Galen, that the blood passed from one ventricle to the other through small openings, until Vesalius ventured to question the truth of the long venerated authority, and demonstrated that no such openings exist, and this made one of the steps in advance which enabled Harvey later to demonstrate the circulation of the blood.

The *character* of the work before you, gentlemen, is *Scientific*, because it seeks to attain knowledge in the development of facts.

All sciences are included under two divisions, the *exact* and *inexact*. The *exact* comprising those whose results are susceptible of absolute demonstration, such are Mathematics and Logic. The *inexact* are those whose results are not capable of absolute demonstration, but are subject to certain conditions which modify the exactness of the interpretation of their phenomena.

A science, to be exact, requires the completed and classified observation of all the facts or phenomena which can possibly come within its scope. An inexact science, on the contrary, is one the phenomena of which, from its extent and relations to other sciences, can never be fully observed and classified, and hence its general laws cannot be capable of absolute demonstration.

Medicine belongs to the inexact sciences, since it is characterized by the same features.

Its observed phenomena are not all referable to principles which are capable of positive demonstration. It is one of the natural sciences. Its field of observation is *nature*, and the complexity of its

relations precludes the possibility of observing, in a limited period, *all* its phenomena.

The facts of medical science which have been recognized and recorded, form but a part only of those which may come within its bounds, and from a consideration of these facts the laws deduced can only be relative and not absolute.

Among the inexact sciences we meet different degrees of uncertainty; this arises from two causes; *first*, inaccurate observations of facts, and, *second*, too limited a number of facts upon which scientific generalizations are based. * * * *

This rigid mode of examination is too often wanting, and phenomena imperfectly observed are offered as facts upon which to base deductions of general truth.

Again, when the relations of a science are so extended and complex, the number of facts from which general laws are to be constructed must be very extensive, and, to obtain such a number, a long series of observations is necessary. * * * *

It is a truth which we are compelled to acknowledge, that in all the departments of medical science there has been, to a greater or less extent, a failure to recognize these cardinal points of scientific method. Many of the phenomena of medical science have been hastily considered, and imperfect and erroneous views of them announced. From the grouping together of a limited number of such phenomena, hasty generalizations have been made which have been announced as established laws. Hence there has arisen in the minds of many a *skepticism* in regard to medicine that would deprive it of its character as a science.

You may ask why consider this skeptical tendency important, since medicine is too firmly established as a science to be influenced by the skeptical indifference of a few of its followers? The existence of any erroneous tendency of thought in science is a grave matter. Evils grow; and in an inexact science, many of whose phenomena are inexplicable, such skepticism calls for serious consideration. * * * *

Nor is this skepticism confined to medicine alone; it is the tendency of the times. There exists a habit of thought, vigorous, bold and iconoclastic, which has pervaded almost every department

of human knowledge. It has overturned theories and systems which had been considered fixed and immovable. * *

Recognizing the existence of this spirit of rigid investigation, we are led to understand the real causes of this skepticism.

They are twofold; *first*, the difficulty of observing the phenomena of medical science from their complexity; *second*, the tendency to hasty generalization from small groups of facts. * *

This error is not the *least* common into which medical philosophy has fallen. Observers in medical science, losing sight of the fact that medicine differs from mathematics in exactness, from a few imperfectly group phenomena, boldly announce a law, which, when tested by experience falls far short of explaining what it claims. This tendency to apply deductive reasoning to facts of medical science, has ever proved a prolific source of error. The assumption of a complete general law from a few incomplete generalizations of facts, has operated more decidedly to shake confidence in, and confuse the principle of medicine, than any other source of error which has prevailed.

The mathematician, dealing with absolute and exact facts, announces his general law. From this general law, by a systematic chain of deductions, he proceeds to the consideration of individual facts. His general law being perfect and universal, the conclusions reached under it, in regard to his individual facts, must be accurate and complete also. He thus reasons from the general to the particular, and his deductions as to the individual fact are as accurate and perfect as the general law from which his process of reasoning started.

Such is not the case with the medical philosopher. He is the observer of individual or scattered phenomena having differing relations and tendencies.

Starting with his individual facts, or group of facts, he seeks to frame some general principle or law which shall include such phenomena as he may have observed.

He thus proceeds from the particular to the general; or reasons, in other words, by an inductive process, from the facts observed to generalizations based upon these facts. Herein lies the danger. The number of his facts collected being limited and not including

all the phenomena which may appear in this direction, the generalizations drawn from them are not sufficiently comprehensive, and fail to explain the phenomena observed by others when tested by this law.

The failure of the laws of the science in any part to explain the phenomena arising under such laws necessarily generates a want of confidence in such laws, and the transition from partial distrust to complete skepticism is rapid. Thus we readily recognize the second of the two prominent causes of the two skeptical tendency which all have been considering.

With the evil before us it is our province to seek for and apply its remedy, and the nature of the remedy is at once suggested.

In *systematic method* applied to observation and deduction we find a ready and efficient means of combating the sceptical tendency to which I have referred.

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This faulty and unscientific generalization produces skepticism by the substitution for facts, of processes of reasoning or theories based upon insufficient premises. Encouraging false opinions, hindering scientific investigation it has produced confusion between correct and incorrect theory.

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You may ask why, if theories in medicine be so apt to mislead, it may not be better to discard theory and trust wholly to observation and experience, as did the Empiric school of an early day. I readily admit that a false theory is worse than no theory at all. But pure empiricism is as impossible as pure rationalism.

Every one of us has our theory of disease and treatment. We now and then meet one who will maintain that he has no theories but is entirely *practical*. Such a man *has* theories nevertheless, and generally founded upon a very unsubstantial basis, inasmuch as he is in reality an unconscious theorist who is unable to distinguish between his own imaginings and real phenomena.

Theory is a necessity in all science, and a sound and well grounded theory is not only the means of connection between

numerous complex phenomena, but the key by which the intricacies of the problem may be unlocked.

The last half century has been specially marked by a growing spirit of earnest inquiry. It has not been sudden in its commencement. We trace it back to its origin in the beginning of the 16th century, when with the birth of Protestantism, a tendency to liberality of opinion and seeking for the truth was developed. This has steadily increased with the diffusion of knowledge till, little by little, the web of error, which was interwoven with a warp of truth, has been unravelled and a purer fabric of facts has been formed as the mantle for science.

This healthier state of inquiry has changed the aspect of many of the physical and organic sciences; has overturned beliefs once considered unmovable, and has caused a distrust of and want of confidence in others which were considered equally secure. To such an extent has this spirit developed, that in no period of the history of medical science has existed so healthy a state of observation. Let but a new fact be announced in any department, and a hundred observers immediately turn all their powers of analysis to test its accuracy and truth. How different this condition from that of the earlier history of our sciences!

Let me for a moment briefly review some of the prominent eras in the past of medicine in illustration.

From the period when medicine ceased to be purely an art, and assumed the character of a science, it has been influenced by all the prevailing tendencies of human thought.

Perhaps the most marked and tenacious error of the past has been the reverence for *authority*. I have already referred to the influence which this blind adherence to opinion has exerted.

This was broken in upon by the period of charlatanry, and faith in specifics which followed it, and prepared the way for the introduction of metaphysical systems to interpret and explain the nature of the phenomena of health and disease.

The confusion of truth and error in medical science was correspondent with that which existed in the so called schools of philosophy, which were the outgrowth of the idea then prevalent that

logic and philosophy were the crowning studies of the human intellect. * * * *

Again, the belief in specific remedies which led, in this earlier day, to the long and unavailing search for the "*Elixir vitæ*" and "*Philosopher's stone*," has been specially hostile to the advance of science. * * * *

Another prominent error of the past has been a *speculative pathology* or an inadequate recognition and interpretation of the causes of disease. Upon the prevailing theories of the causation of disease have been built, systems of therapeutics which have resulted most disastrously.

The error so long prevalent, that disease is something *added to* the body, possessing an individual and distinct existence is passing away, and instead, the fact, that it is a perverted physiological process or function, a lessened vital power, has taken its place, and has developed what Dr. Chambers has so aptly denominated "*Restorative medicine*."

These brief illustrations of the errors of the past, and the tendency of the present to a truer and more rational medicine, are sufficient to show the influence of the earnest and scientific spirit of investigation, which I have described.

They show us that the period of unthinking belief, and speculation has passed away, that, commencing in a simple empiricism, medicine has by successive stages grown into a *comparatively* positive science. The facts accumulated by the observations of the past have been carefully analyzed and gathered into a form which constitutes positive knowledge. And in the application of this knowledge we recognize the great development and progress of the present.

This we will consider under the departments of *preventive* and *curative* medicines.

Preventive medicine manifests its power in a two fold manner; *first*, by modifying existing disease; and *secondly*, by preventing its development; both of these characteristics are based upon a better and more perfect knowledge of the predisposing and exciting causes of disease. * * * *

In *curative* medicine the advances have been no less signal than in preventive medicine.

A more accurate pathology and physiology have given us a more scientific therapeutics; not only have sounder views of rational treatment of special diseases, based on advances in pathological knowledge, been adopted, but the Pharmacopœia has been enriched by invaluable additions derived from a better knowledge of the physiological action of remedies.

From the more accurate pathology of to-day, how opposite to that formerly followed is the treatment of the inflammatory and febrile diseases. The recognition of the tendency to self limitation of disease after the completion of its characteristic cycle, has abundantly proven that the restorative treatment of to-day offers far better results than the depleting and abortive practice of the past.

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Another advance in curative medicine has arisen from the assistance derived in special diseases from the use of special instruments employed to detect textural changes and morbid processes, which before were not recognized.

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Another great advance in modern medicine has been the result of a diffusion of a better and more correct understanding of the word *cure*, and of the distinction between the idea of curing the disease and curing the patient.

We seek the cause and remove it, while nature completes the cure by removing the visible symptoms.

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In this brief survey of the past and present of medical science, I have endeavored to point out its characters as a science, the prominent errors into which it has fallen, and by a brief analysis of their causes to show its present condition and tendencies.

In considering the relations of medicine, past and present, one cannot fail to be impressed with its dependence upon the character of any period of its history which we may review.

The progress of all science is parallel with and accompanies the development of civilization; medical science shares in this process of development, and so perfectly does it reflect the prevailing tendency of thought, in any age of man's history, that the condition of medical science may be taken as the measure of civilization of that period.

The relations of medicine to science to-day, are both direct and indirect.

In its *direct* relations, it follows the progress of science, adopting its conclusions and appropriating its advances to the development of its own departments.

The more fully developed laws of light, heat, sound, electricity, and of chemistry, have directly contributed to the expansion of medical science, rendering physiology more perfect and physical inquiry into disease more exact and certain.

In its *indirect* relations to physical science, medicine offers even more decided evidence of its dependence upon a parallel development. I have already referred to the influence of the *temper* of modern science upon modern medicines, in the production of a skeptical tendency of thought in observation. In a period of such rapid advancement as the present, careful scrutiny of proffered opinions is indispensable, we must, however, guard against too hastily discarding the accumulated experiences of those who have preceded us. In the empiricism of the past we may find a store of practical wisdom.

We are undoubtedly in advance of our fathers, but we must not lose sight of the fact, that with the gains in ease and perfection of observation, we are liable to losses in being deprived of that patient study of detail and reserve of statement which less facile means of research have given those who have preceded us.

The *temper* of modern science has other relations to medicine than that to which I have just referred; and what this temper is, it will be well for a moment to consider. Dr. Acland, in referring to it, says; "It would be difficult more aptly to describe it than by the words of Newton: 'The main business of natural philosophy is to argue from phenomena without feigning hypotheses, and deduce causes from effects, till we come to the very *first cause*, which certainly is not mechanical.' To discuss this simple phrase and expand it to its full significance, would be to recapitulate the history of a great part of modern science. There probably is no part to which some modern thinkers would not take exception. But it cannot fail to raise, in every mind, a splendid and affecting image of the boundless field of physical philosophy. It will sug-

gest to one a countless host of loving worshippers; to another, it reveals a crowd of stern enquirers ardently groping in dim, cold twilight. Each in his own sphere, each tinged with a special hue of his own nature in Physics and Biology, all alike are searching for a *true cause*."

What ends have they attained? The statement that all action of which we are conscious is the result of solar heat upon interdependent and correlative existences. That, in this system, things are capable only of interchange; that nothing now existing is destroyed; that no new energy is created.

Does this theory of correlation of forces bear upon medical science? Indirectly we trace its effects.

The belief which so long prevailed that a vital principle was the controlling force of organic life, is now abandoned.

The hypothesis of Darwin is rendered worthy of but little attention since, by this law of correlation, it is shown that mental correlations extend into all structure and growth, and that living beings, placed in similar conditions, will proceed in parallel lines, and conversely also.

These ideas, at first sight, seem to have but little bearing upon an art which has to do entirely with the work of every-day life. Yet we see, from a moment's reflection, that a pursuit devoted to the study of the natural sciences must be indirectly, as well as directly, influenced by the general temper and character of scientific thought.

But we must pass to another of its relations, that is, its relation to the wants of man in the complications of society.

Your attention has been called to this question at some length during the past four weeks, as you have followed me in the discussion of the topics of municipal Hygiene. The present day has made *public* and *preventive* medicine a great branch of medical science.

The social questions of the time, the problems of political economy, all bear upon and mingle with the studies which sanitary science offers.

I will not weary you with a further discussion of these relations

of the medicine of to-day, but pass to the consideration of one or two topics which the occasion would render specially significant.

If the relations of medicine be such as I have indicated, *what should be the character of the preparation* of the physician for his duties. It is certain that he should be many sided, that his powers of observation should be thoroughly schooled and trained to precision and exactness in perception and thought.

This is to be accomplished by a *liberal education*.

And here I know that I tread upon debatable ground. Two rival methods claim our attention, the *Classical* and the *Scientific*. In no partisan spirit, we can say *both* are equally of value.

From the Scientific we get that intellectual culture which gives strength and massiveness. From the Classical is derived the æsthetic element of culture which develops the emotional part of our nature.

To separate the moral and emotional from the intellectual in culture is an impossibility. So, in a conception of culture, liberal in character, the separation of the scientific and the classical is impossible. It is by the union of these two means that we achieve what I would designate as a *liberal education*.

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We cannot, then, in such an education, be bound to a rigid and scientific method alone, but must cultivate the the social portions of our nature by a blending of the æsthetic with the scientific.

Professor Tyndall, in a recent address, in discussing the culture of the scientific man, says: "Man is not all intellect. If he were so, science would be his proper nutriment. He *feels* as well as *thinks*, he is receptive of the sublime and beautiful as well as of the true.

"The circle of human nature, then, is not complete without the arc of feeling and emotion. The lillies of the field have a value beside their botanical one—a certain lightening of the heart accompanies the declaration that 'Solomon, in all his glory, was not arrayed like one of these.'

"The sound of the village bell, that comes mellowed from the valley to the traveller upon the hill, has a value beyond its accoustical one. The setting sun, when it mantles with the bloom of the

rose the Alpine snows, has a value beyond its optical one. The starry heavens had for Immanuel Kant, as you know, a value beyond an astronomical one. Round about the intellect sweeps the horizon of emotions from which all our noblest impulses are derived. I think it very desirable to keep this horizon open; not to permit either priest or philosopher to draw down his shutters between you and it."

This topic, gentlemen, brings me to the statement of the object you have in coming here, as well as the functions of the university. On your part, you come to seek an education which shall answer to the character which I have described as necessary for you. On the part of my colleagues, I welcome you to a school whose aim is to offer you the opportunities for vigorous work, as well as the cultivation of the finer qualities of mind and heart, which shall prepare you to commence the labor which is to occupy the energies of your lifetime.

The character of the work before you is such as calls for careful and discriminating study.

I trust that you bring to it the same earnest spirit of inquiry which you manifest in other pursuits. It is the aim of your teachers not to instruct you simply in dry formularized knowledge, but to carry you with them and associate you in the energies of their own minds. You do not come to acquire a science and an art whose laws are already fully observed and defined, but you come as learners of, and searchers after, *truth*. Individual study and research is required of every one of you, for each has the opportunity to add something to the accumulated store of knowledge. Truly has it been said that "neglect of plain and patent truths has been the source of many of the great errors which appear on every side," and nothing, surely, contributes more largely to the maintenance of such errors than a dogmatic spirit of adherence to established formulas.

Careful and exact habits of study, combined with efficiency, are the essentials of success. Not every one, indeed, can till the long furrows with seed, not every one can pile the broad fields with shocks of ripened grain; yet not a single hand is useless—that which cannot sow can weed, that which cannot reap can glean.

All are needed to complete the great work of growth and gathering in. The number of truly great men in the profession is comparatively small. It is not expected that *every one* shall become distinguished in some department of the profession, but each *can be exact*, and fitted to meet the requirements of the work falling in his sphere.

The object of the medical college is not to turn out, at each session, as large a number as possible of medical philosophers, but it is to educate the student in such a manner as best to prepare him for the daily work which he assumes in the practice of his profession.

To teach him *how* to observe, *what* to observe, and how to *classify* and apply the results of his observation. There is nothing in such an education to prevent one from aspiring to the heights of science or of philosophy, but rather to encourage and aid him by laying such a foundation as shall support the fairest superstructure which patient toil can raise.

Beyond the immediate stimulus of future success, lie attractions in the study of the profession which you have chosen, surpassing in interest those of any other pursuit.

The intricacies of anatomy, the wonderful vital processes of physiology, organic chemistry, the therapeutic and physiological action of medicines, the science and art of surgery, the study of disease and abnormal conditions, all offer an endless field of observation, and one which deepens in its attractions as you advance within it. Yet these subjects form but a part of the curriculum of study placed before you. The advances in knowledge during the past half century place you to-day above the students of the last generation, and the steady accumulations of knowledge which are fostered and preserved by our civilization, will in future times give a power and force of character to our profession which will surpass the brilliant position of to-day. You are studying with constantly increasing advantages. Your opportunities are to-day greater than those even of your immediate predecessors, and you ought consequently to surpass them in your attainments.

I have urged upon you the necessity of a recognition of the scientific character of your profession, yet I would remind you that

to prove available you must conjoin with it that which shall make it practical. Science, unless it can be made useful, would be only an amusement, or recreation. To be of value it must be joined with art. In reviewing the social history of man, we recognize medicine as commencing as a simple art. As we advance from the savage state to that of civilization, the steady development of the art toward the dignity of a science is apparent, until to-day, the union of its two phases, the art and the science, give it the elevated position which it occupies.

While, then, your earnest aim should be to master as fully as possible the science of medicine, you must as earnestly cultivate the art, in order to make your scientific attainments of real and practical value to you.

It is this happy combination which often is the explanation of the differing success of equally cultivated men, in our profession.

It is the aim of the clinical teachers of this institution, to instruct you in the art of applying your science, and in cultivating that *tact* in the application of your science to practice, which shall make you masters of your art. The medical *philosopher* may, perhaps, rest contented with his science; but the practitioner must ever labor to sustain a constant and coequal development of both the science and the art.

Gentlemen, your work is before you. You have seen the relations of medicine to the past; you know the relations of medicine to the present; you can look hopefully forward to its relations in the future.

Let me, in concluding, express the hope that, for you the future may prove the unfolding and expanding of the germs of knowledge which have started here. That you will feel that, upon each one of you, it is incumbent to prove yourselves men of thought, men of knowledge, and above all *scholars*. Youth is no bar to entrance upon the cause. The scholar of maturer years may have the largest knowledge, the strictest training. On none so much as on him do the interests of learning depend for prudence and retrospection. But where hopefulness is needed, where vigor is required, we may be content to trust to young spirits. The union of the young and the old can alone achieve the scholars' march.

It is for the young to throw forward the glances which give life to the array, while its security is insured by the backward looks of the old. The mountain tops behind lost sight of, the way becomes uncertain; it is weary if the peaks before are not discerned.

Enlist, then, in the cause which calls you, the cause which depends upon you, Shape your studies according to the true ideal, and you will find them crowned with beauty and happiness, with success without and blessings within.

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ART. II. *Notes on a Case of Aphonia due to Paralysis of Intrinsic Muscles of the Larynx, and its Treatment by its External Manipulation after the Method of Oliver.** By W. W. POTTER, M. D., of Mt. Morris, N. Y.

Mrs. —, æt. 41, married 17 years—mother of three children—highly neurotic temperament—has lost her voice at periods since she was 20 years of age, and at one time for ten months prior to her marriage. She could not speak above a whisper.

December 25, 1873, she again lost her voice and did not regain it until May 16, 1874—5 months nearly. During this time galvanism, chalybeates, counter-irritation, strychnine, inhalation, etc., were used persistently but all to no purpose so far as the Aphonia was concerned, although the patient's health was very much improved thereby. Failing with these means, as a *dernier ressort*, having by laryngoscopic examination ascertained that there was partial or incomplete paralysis of the vocal cords, I determined to try the method of Oliver, which, though novel, was so completely successful that I shall ask to trespass upon your time with a narrative of the details of its employment:

On the 14th, of May, 1874, I placed the patient in a chair, sitting erect, and with the thumb and forefinger of my right hand compressed the rings of the thyroid cartilage gently but firmly, and directed her to make an attempt to speak. In the course of a few moments a coarse guttural sound was produced, but as soon as the compression was removed the ordinary whisper reappeared. The compression was kept up with occasional moments of rest for

*Amr. Jour. Med. Science, April, 1874.

15 or 20 minutes, but with no other results than the guttural sound before referred to. Not wishing to fatigue my patient, I desisted from further attempts for the day, and left with an appointment for another seance at 11 o'clock next morning. The pressure was applied in like manner at this time and the patient directed to pronounce the *vowels* a, e, i, o, during forced inspiration. A feeble voice sound was soon produced, but nothing more. Next day another trial was made, and this time the sounds were clearer and more natural than before, but the whisper returned soon after the compression was removed. I directed her to practice the attempt to read aloud during the afternoon, and about 5 o'clock she sent me word that her voice had returned. It was some days, however, before it resumed its natural sound. This was on the 16th of May, and between that time and October 20th, the voice was lost several times at intervals varying from one to four weeks, but was always restored at a single sitting, and has not been lost since the latter date, viz, October 20.

I shall not at this time enter into a discussion of the pathology of Aphonia. My object being simply to call attention to this method of treatment in these cases which was first brought to the notice of the profession by Dr. Henry K. Oliver, physician to the Massachusetts General Hospital, Boston, in a paper published in the *Amr. Jour. Med. Science* for April, 1870, and in which he reports some half dozen cases successfully treated in this manner.



ART. III. *Medical Society of the County of Albany Semi-Monthly Meeting, Nov. 22d, 1875.* Reported by JAMES S. BALEY, M. D.

Dr. HENRY MARCH, President, in the chair.

The President made a few happy remarks, after the reading of the minutes of the last meeting. He thanked the Society for the large majority they had given him in electing him President, and stated that he would do his part in keeping up an interest in the Society. He would adhere strictly to parliamentary usages, and urged the necessity of punctual attendance, and through discussion upon every question that might be presented.

Dr. QUACKENBUSH rose and said he was sorry that the first duty the President would have to perform should be a sad one, and he asked leave to present the following resolutions:

Whereas, we have heard with feelings of regret the announcement of the death of Frederick G., youngest son of Dr. John Swinburne, just entering upon early manhood, therefore,

Resolved, That this Society extend to our fellow associate and friend, Dr. Swinburne, our heart-felt sympathy in this hour of his bereavement and sorrow.

Adopted unanimously—the members standing.

Dr. QUACKENBUSH then proceeded to report a case of Atresia Vaginæ with treatment at time of delivery. He said, I propose to present to the Society a case of Astresia Vaginæ complicating delivery, and in describing the subject I will speak of the nature of Atresia, its causes and treatment, then describe the case and its management. Atresia, as its name signifies, is a non-perforated condition of the vagina, commonly called occlusion of the vagina. It may be congenital, when there is an entire absence of the canal, or it may be accidental, and then the obliteration may be partial or complete. Its causes are impaired or arrested developement, prolonged or difficult labor, chemical agents locally applied, mechanical injuries, and inflammations, the result of gonorrhœa or syphilis. When the occlusion is the result of inflammation in infancy or childhood, the seat of the adhesion is low down in the vagina, when the result of inflammation or sloughing consequent on protracted labor, it is more apt to be met with in the middle or upper third of the vagina; and in the cases which I have met with as the result of local applications, the occlusion has been near to, and involving the neck of the womb.

The treatment must vary with the nature of each case. When the adhesions are formed at the entrance of the vagina, the parts must be separated by an incision from top to bottom of the vulva, and the opening maintained by the insertion of a pledget of lint saturated with glycerine. When the adhesion is farther up in the vagina the parts must be drawn apart laterally, a grooved director passed through the aperture, and following this a bistoury, by which incision must be made first on one side and then on the other, always carefully avoiding cutting above and in front

or directly behind for fear of injuring the bladder in one case and the rectum in the other.

An important question here arises. How far shall the incision extend? Shall the whole opening be made with the knife? The best practice seems to be to divide the mucous membrane to a sufficient extent to allow of the entrance of the finger and then tear the opening till a sufficient enlargement is obtained. This procedure has two advantages; by means of tearing the parts we avoid the cutting of arteries, and according to some authorities, the parts are less likely to unite by adhesive inflammation after being torn apart than when divided by the knife.

The vagina should be cleaned by the injection of warm water, and then the aperture made should be kept open with a cylindrical pledget of lint saturated with glycerine and introduced through the entire length of the canal. Authors have written much about the vaginal walls contracting and again adhering but in my experience I have not found such to be the case. Having now given a definition of the abnormal condition of *Atresia Vaginæ* I will narrate a case:

Mrs. A—, æt. 23, was confined with her first child in 1867, in the city of New York. Her labor was protracted, and she was instrumentally delivered of a dead child. She did not become pregnant again till February last, and the tenth of this month she was taken in labor under the care of Dr. Newcomb of this city. The Doctor at once recognized the condition of the patient and invited me in consultation. Upon examination we found an almost entire occlusion of the vagina about two-thirds up the canal. The small aperture through which the menstrual discharge had escaped, would scarcely admit of a small director; through this aperture, the woman having been placed on the side of the bed in a suitable position for instrumental delivery—a director was inserted, and gradually a bistory was thus introduced and incisions made on either side. The opening was large enough to admit the introduction of two fingers. A further examination was made, and the womb being found open, the membrane protruding, and the pains strong and frequent, the sac was ruptured and the waters escaped. The forceps were now applied, the

opening made in the vagina being sufficient to admit of the blades, and in a few moments a living child, weighing $10\frac{1}{2}$ pounds, was delivered. Of course the walls of the vagina and consequently the opening made were much dilated during the delivery. The subsequent treatment by Dr. Newcomb has consisted in the introduction of pledgets of lint, thus keeping the parts well distended. The mother and child are both doing well. The Doctor showed the Society the forceps used by Dr. Newcomb, and stated he used them in preference to his own, as the opening made in the occlusion would more readily admit the blades. In speaking of chemical agents causing Atresia he said he referred to their use in the treatment of various troubles of the vagina. They were not the cause in this case. The treatment must depend on the peculiarities of each case. In one on which he operated before the patient became pregnant, he repeated the incisions several times and carefully kept the vagina open. The patient afterwards became pregnant, and labor coming on she was delivered without any trouble, the labor being in every way natural. The Doctor referred to another which occurred in the City Hospital about ten years ago, Dr. March examined the patient but did not at first find any opening in the occluding membrane. Upon further examination a small opening was found, and using it as a guide, it was enlarged and delivery followed. Death, however, resulted from peritonitis. This case was thought by the Doctor to have been the result of gonorrhœa.

Another case which happened in the Doctor's practice was caused by the use of lunar caustic, and the patient stated when first seen that she had falling of the womb. On examination it was found to be occlusion of the vagina.

Dr. BLATNER referred to a case reported last year by Dr. Ten Eyck, which he thought somewhat similar only the opening in the occlusion was smaller. Dr. Ten Eyck stated that it would only admit an eye probe. These cases are rare, and he could only find one reported, that was in the *Lancet* of 1834, and was a case of the late Dr. James McNaughton's. The literature on this subject is scanty, and judging from the way some authors treated the subject, they could not have seen many cases. Some authors

mentioned the danger of injuring the peritoneum, but we know that the peritoneum does not cover the whole uterus and is necessarily pushed upward by the gravid organ.

The President asked if this was the first case Dr. Quaekenbush had had? The Doctor replied that he had had four.

Dr. HAILES inquired if the oecclusion was in the upper or lower two-thirds?

Dr. QUACKENBUSH said the upper two-thirds.

Dr. HAILES remarked that that simplified the operation having the bag of waters pushing the oecclusion down. He also asked if in any of his cases the oecclusion had been near the womb?

Dr. QUACKENBUSH said it had in the case mentioned as being in the City Hospital.

Dr. HAILES asked if the Doctor did not consider it remarkable that the spermatozoa should find their way through the small opening in the membrane. It was generally thought that the ciliated epithelium of the vagina was an important aid to the movements of the spermatozoa, but this case seemed to give more importance to the spermatozoa themselves?

Dr. QUACKENBUSH replied, Solomon says "There are three things which are too wonderful for me, yea four, which I know not, and one of them is the way of man with a maid."

Dr. DEVOL wished to know from Dr. Quaekenbush or Dr. Newcomb, if pregnancy occurred after the oecclusion or before?

Dr. QUACKENBUSH said he had no doubt the oecclusion occurred at the time of her first confinement in 1867.

Dr. BLATNER thought the question was fully answered in Dr. Ten Eyek's case when the patient was examined before marriage, and the oecclusion found to exist. The spermatozoa are the active principle in fecundation, and the result of these cases teach us an important point in a medico-legal view. It has been found by experiment that the spermatozoa will penetrate through a thin membrane by their own activity, and if they can pass through such a substance, without any opening, why not through a hole large enough to admit a probe.

Dr. DAVIS said in the case of congenital atresia in which he had operated, he could find no opening larger than a fine silver

wire, and could only introduce that about half an inch. If this small canal extended to the uterus it was very tortuous. He had to cut very cautiously and slowly, and by careful dissection make his way to the uterus. The incision measured four and a half inches when he had finished. He could not tear the parts—they being so firm—he was unable to make any impression. Could only cut—tried to use a director but was unable to do anything with it.

With the sound in the bladder, his finger frequently introduced into the rectum, he worked his way with the knife to the uterus.

Dr. QUACKENBUSH enquired how Dr. Davis knew his case to be congenital?

Dr. DAVIS replied he could only judge from her history. She had never menstruated. At certain periods resembling monthly sickness, she suffered great pains, and sometimes when in this condition, by introducing her fingers into the vagina and pressing upon the occlusion she could press out a few drops of dark blood.

Dr. QUACKENBUSH asked if the Doctor had made any examination for the uterus.

Dr. DAVIS said in company with two others he had examined per rectum and felt the uterus high up. At the time of operating he reached the uterus, his knife suddenly opened into some cavity, and he thought he had cut into the rectum, but it prove to be the cavity of the cervix, considerably dilated, probably by continual pressure of menstrual fluid.

Dr. BIGELOW inquired whether the patient menstruated after the operation?

Dr. DAVIS answered she did regularly, but in very small quantities.

Dr. MOORE stated he had a case at present where the uterus is absent. Had one where the vagina was occluded by an imperforate hymen, and when operated on a large amount of menstrual fluid was released.

Dr. HAILES asked if it was not considered dangerous to operate for the removal of the whole retained menstrual secretions at one time. If it was not better to remove it by several operations?

Dr. QUACKENBUSH said he thought it was.

Dr. JAMES P. BOYD, JR., reported a case of empyema, and said the patient was 45 years of age, native of Germany, and by occupation a saloon keeper, came to St. Peter's Hospital to be treated for a diarrhœa which he said had troubled him for three months. He stated that previous to this time he had always been well, and attributed his condition solely to the diarrhœa. His appearance attracted my attention at once; he was very pale and emaciated, and his features were unusually sharp. After close questioning I found that for the last few weeks he had chills, drenching sweats, and some fever towards evening. His appetite had left him, and he was very weak. His bowels would be loose one day and constipated the next, and the dejections were small and thin. The family history was good. He complained of no pain, cough nor shortness of breath, and was irritated when I questioned him in regard to his chest. Said sarcastically that he never had a pain in his chest, and that if we should cut him open we would find his lungs perfectly sound. I examined the chest carefully and found on the left side from the lower third of the scapula downward absolute dullness, absence of respiratory murmur, and vocal fremitus, the line of dullness extended somewhat higher near the axilla. From the severity of the constitutional symptoms I inferred that the fluid in question was purulent. The next day the house physician informed me that his evening temperature was 102° F., pulse 100, and that in addition to the chill and sweats he complained of pain in the right inguinal region about an inch above Poupart's ligament. On examination I found a hard mass the size of a horse chestnut somewhat tender to the touch. He walked about the room without pain. The bowels were still loose, notwithstanding the measures taken to control them, and the patient said he had to force himself to eat. The following day I found him for the first time in bed, and the uneasiness in the inguinal region had increased greatly. He now complained of some pain in moving the right leg, and was unable to retain anything on his stomach. Towards evening the house physician was obliged to use a catheter to empty the bladder. During the next day the skin over the region of the cæcum became discolored, and the swelling was now plainly visible. The dullness in the region

increased and extended to the brine of the pelvis, a discoloration was also visible below Poupart's ligament. He could not move the right leg, and vomited his food. The urine was again drawn off, his strength failed rapidly, and he died that night, remaining perfectly conscious up to the time of his death.

Autopsy 14 hours after death. Body much emaciated, skin discolored in right inguinal region and extending into right lumbar region, also below Poupart's ligament where there was crepitation. Thorax, heart and right lung normal left pleural cavity partially filled with pus of a very offensive odor, and a dark reddish color. The ribs corresponding to the fluid were hollowed out and covered with brittle calcareous plates. The cæcum and vermiform appendix was firmly bound to the sheath of the psoas muscle, which latter was much distended. On cutting into the psoas muscle a pulpy mass of greenish color and fecal odor oozed out. The abscess extended below Poupart's ligament. Cæcum and vermiform appendix healthy. No disease of the vertebræ. A slight congestion visible in mucous membrane of small intestines. Liver normal, kidneys normal, no communication through or under the pillars of the diaphragm with the abdomen.

Dr. BIGELOW said he had a case somewhat similar two years ago. A man with dullness under the left scapula, and after a while a swelling on the inner side of the left thigh. Dr. Van Derveer saw the case with him and aspirated the abscess several times, drawing off a quantity of pus. The case finally recovered.

Dr. BOYD said cases were reported where there was communication under the pillars of the diaphragm, and in a case he saw the post-mortem of in New York, there was almost a complete calcareous casing of the affected chest.

Dr. DEVOL said he had seen several abscesses of the lungs. Had a patient where pus was expectorated, and the physician which had been in attendance said it was an abscess of the liver. The Doctor thought many abscesses find their way to the nearest opening. The first subject he had ever seen had an abscess of the lungs, which discharged itself between the vertebræ.

MEDICAL NOTES.

ART. 1—*Notes on Ophthalmology*.—By LUCIEN HOWE, M. D.

1. EXAMINATION OF COLORED SCHOOL CHILDREN'S EYES, BY PETER A. CALLAN, M. D.—Another contribution is here made to a subject which is receiving well deserved attention in this country. It will be remembered that the extensive investigations of Cohn in Germany, and Erismann in Russia, have proved that the habits of school life tend strongly to produce nearsightedness. Within two years past, similar examinations have been made in New York, Brooklyn, and Cincinnati, the results of which are embodied in a paper read at the last meeting of the American Social Science Association, in Detroit, by Dr. Webster, of New York. It was found, for instance, that while the district schools contained less than 14 per cent. of near sighted pupils, that proportion increased steadily through the intermediate, high and normal schools, to over 22 per cent. in the latter. The immediate cause of this is undoubtedly the neglect of hygienic rules relating to the position of the body while studying, to the amount of light supplied, and several other apparently trivial matters.

But a predisposing and not less important cause is the hereditary tendency to nearsightedness among children of the present day, derived from generations of already educated parents. It is this phase of the subject which Dr. Callan presents in an interesting light. His examinations were made upon a set of children subjected in an equal degree as the whites, to all the influences which are known to develop nearsightedness, with the exception of belonging to a race which has not until now enjoyed any educational advantages. The result is significant and instructive. While other schools for white children in this country have shown a proportion, as stated, of from 13,3 per cent. to 22,8 per cent. of nearsighted pupils, among the negroes of the same grades and ages, there was found to be an average of only 2,6 per cent. Although such a comparison is in many respects unfair, it holds good in the main, and gives some idea of how great is the influence of the hereditary tendency in the development of nearsightedness.

If this disease never amounted to anything more than the inconvenience usually experienced, the whole matter might be rather one of interest than importance. But unfortunately it sometimes assumes that dangerous form called "progressive" nearsightedness, or myopia, a disease the diagnosis of which is easy enough, but the successful treatment is a matter of extreme difficulty.

Some very satisfactory results were, however, reported at the meeting of the Ophthalmological Society, in 1874, in a paper.

II. ON THE ATROPINE TREATMENT OF ACQUIRED AND PROGRESSIVE MYOPIA, WITH A TABLE OF CASES. BY HASKET DERBY, M. D.—Recognizing the fact that in extreme degrees of Myopia there is generally "a species of spasm of the accommodation," Dr. Derby sought to overcome this by the use of Atropine. Solutions of the sulphate of various strength were used, but in all cases it was sufficiently concentrated to produce complete dilatation of the pupil. In order to overcome the spasm entirely, the treatment was continued from two, to eight or ten weeks, as the case required.

As a result he found that in 5,52 per cent. there was definite improvement; in 8,9 per cent. the myopia was arrested; in the remainder the myopia either progressed or the result was unknown.

III. INVESTIGATIONS CONCERNING THE PHYSIOLOGICAL ACTION OF ATROPIA AND PHYSOSTIGMIN ON THE HEART AND PUPIL.—ROSSBACH. *Verhandl. der physical-medicin, Ges. in Wirzburg*. Bd. V. Heft. 1, pag 1. bis. 79.)

In regard to the comparative action of Atropia and Calabar bean, it has been commonly supposed that they are antagonistic, and so they seem to be practically. But exact experiment shows that the effect of both is first to contract and then dilate the pupil. With Atropia it is only the last stage, and with Calabar bean the first, which is principally apparent.

IV. HOW CALOMEL ACTS WHEN DUSTED IN THE EYE. KAMOMERER.—(*Virchow's Archiv*. Bd 59, page 467.)

Light has recently been thrown on the action of another substance much used in diseases of the eye. That is Calomel. Phlyctenular forms of Conjunctivitis and Corneitis often yield readily to this when applied locally, as a result, it was supposed, of the

mechanical irritation produced. But an examination of the urine of patients under such treatment shows that the mild chloride is changed into the bichloride, and acts as such.

V. CONCERNING IRIDOTOMIE. KRUGER.—(*Sitzungsbericht der Ophthalmologischen Gesellschaft*, 1874.)—ON IRIDOTOMY—GROSSMANN.—(*Klinische Monatsblätter für Augenheilkunde*, April, 1875.) IRIDOTOMY AND ITS APPLICABILITY TO CERTAIN DEFECTS OF THE EYE—A. W. CALHOUN, M. D., 1875.

The literature relating to this operation increases, as its satisfactory results become more numerous. The idea is, to make a simple slit across the iris, and allow the retracting edges of the wound to form the pupil. To this end the same corneal incision is made as in Iridectomy, and through it there is introduced a kind of forcep-like scissors to make the desired cut. Such a procedure can be substituted for iridectomy whenever the latter would be indicated in cases where an opaque cornea hides the real pupil, or where that is filled by an exudation, as in iritis following cataract extraction. It has the advantage over iridectomy of offering less violence to the iris, that structure being cut *into* instead of being cut *out*. But another reason for preference given to it is, that there is no such flurred indistinctness of vision produced, as often follows iridectomy. The rays of light passing through a smaller opening are brought to a more sharply defined focus on the retina.

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MISCELLANEOUS.

Diagnosis of the Lesion in Paraplegia.

By H. C. Wood, M. D.

GENTLEMEN:—The patient before us offers himself with the statement that he is paralyzed in the lower limbs, or in other words, is suffering from paraplegia. As paraplegia is not a disease, but a symptom, we must in every case endeavor to determine the cause of the paralysis, or, in other words, the real nature of the disease. Before attempting, this, however, we must be sure that the patient is really suffering from nervous paraplegia, because cases will present themselves in which the supposed palsy is due to general feebleness, to suppression of movements owing to the pain caused by

them, to diseases of the muscles themselves, to paralysis of groups of muscles, or to disturbances of sensibility and loss of co-ordinating power. In regard to the diseases of the muscles, it may be stated as an axiom that when the lower limbs are paralyzed without any of the muscles of the trunk or of the upper extremities being affected, the paralysis is not due to disease of the muscles themselves; muscular atrophy, pseudo-hypertrophy, and allied forms of muscular degeneration never, so far as I know, effecting exclusively the lower extremities.

The apparent paralysis in the man before us is not, then, due to muscular degeneration. Neither is it caused by pain, since our patient suffers none whether at rest or in motion; nor are any groups of the leg-muscles especially effected. Is the man then suffering from loss of co-ordinating power, or, in other words, from locomotor ataxia? Watch him as he walks by the aid of a cane. See how his feet glide over the floor. He cannot raise them, but slips them over the smooth surface. The gait is enough of itself to show that he is paraplegic. The man whose muscles retain their vigor, although he cannot control them, lifts his feet hastily and irregularly, but with no feebleness. Laying the man on his back, and testing the muscular power of his legs, we are confirmed in this opinion; the patient is certainly paraplegic.

Having made out the existence of the symptom, before endeavoring to determine its cause let us get out the important facts of the case. These may be summed as follows. First, the attack came on gradually; second, there has been at no time much pain; third, there is decided paresis of the bladder, which followed, not preceded, the paresis of the legs; fourth, the loss of power in the legs is very marked, but not absolute; fifth, the muscles are not very much wasted, and retain, to a fair extent, their electro-contractility; sixth, reflex movements are certainly below rather than above normal, and, so far as can be determined by questioning, never have been above normal; finally, there is no history of a recent attack of acute disease, and the absence from the gums of the green line of copper-poisoning, and the blue line of lead poisoning as well as the lack of the spongy gums and general tremors and cachexia of mercurial toxæmia, and the general expression of health in the man's countenance, negative the idea that our patient is at present suffering from a dyscrasia, either toxic or constitutional.

We are now ready to endeavor to discover the cause of the paralysis. To facilitate this, I have written upon the blackboard the three possible sets of causes of paraplegia:

1. ORGANIC.

Diseases of bones.
" membranes.
" cord.

2. FUNCTIONAL.

Anæmic
Reflex.
Dyscrasic.

3. HYSTERICAL.

Hysteria.

The term functional, which is here employed, might be objected to; but do not let us waste time in this: the group is clinically a

very useful one, and the name is a matter of little importance. Hysterical paraplegia is undoubtedly functional, but I have separated it because in its diagnostic peculiarities it resembles more closely the organic palsies than those of Group 2.

The important question here naturally arises, are we able to determine from intrinsic characters to which of these groups a given case belongs? Usually, gentlemen, we are, but not always. Let us employ the man before us as an example. In the so-called functional paraplegias the onset is always gradual; in the organic it may be almost instantaneous or very rapid, but probably it is more often gradual. In the hysterical variety the paralysis is usually developed at once. In the present case it is plain that these facts do not aid us in the diagnosis, for the disease developed gradually. The loss of power is still imperfect, and has only arrived at its present degree of completeness by a very slow progress of months. In the organic paraplegias you usually have at some period of the disease indications of a motor or sensory functional excitement in the form of spasm or of pain in the affected limbs. In both the hysterical and the functional varieties you rarely, if ever, have any such indications. There is one especial form of pain, very possibly connected with spasm, which appears to be actually diagnostic of organic diseases of the spinal cord or membranes. It is the sensation of a band or cincture around the waist. Our patient, in answer to the question, states that he has felt at times as though a cord were being drawn so tightly around his body that he must fall in two. Again, in functional paraplegias you do not have distinct disturbance of sensation. Partial or even complete anæsthesia is very common in hysterical paraplegia; but there is one modification of sensibility which appears to rank with the cincture in its diagnostic importance. This is the retardation of the passage of a sensation from the periphery to the centre, so that a very perceptible time elapses between the patient's seeing his feet touch the floor and feeling that they do so. In our case this is not distinctly present, but you see that the man feels upon his legs the compass points as one point, although they are really separated by at least six inches.

Since in this man before us there has been a very distinct cincture present for months, and since there is a distinct loss of sensibility in the legs, and at the same time no general indications, past or present, of a hysterical constitution, it is very positive that there is organic spinal disease. Excitation of the reflex activity is, when present, an almost decisive proof of the existence of organic spinal disease; but in the present instance we can get no aid from this, since the reflex movements are not above par. There is, however, one feature of the case which strongly confirms the opinion already expressed. It is the presence of difficulty in passing urine, evidently due to paresis of the walls of the bladder. Whenever, in the course of a paraplegia, distinct disturbance of the innervation

of the bladder occurs, it is very certain that organic disease of the cord or membranes is developing itself.

Our patient is, then, suffering from organic spinal disease. But suppose we had found that the onset had been gradual, that there had been no pain or spasms, that sensibility was not disturbed, that reflex movements were not and had not been increased, that the bladder was unscathed; would it be certain, that the patient was not suffering from an organic spinal affection? No, gentlemen; in a case of so long duration as the present the probabilities would be against the presence of a decided lesion of the cord, but not even this could be said if the disease had lasted but a few weeks. In such cases as that which I have imagined, it is necessary to go over the various possible causes of paraplegia *seriatim*. Search if there be a stone in the kidney or bladder; or, in a woman, if there be a uterine tumor to start the chain of phenomena ending in reflex paraplegia. See if there exist any dyscrasia; or, if anæmia be present; look whether the sufferer be hysterical. Very rarely, however, will this diagnosis by exclusion be necessary in practice, except it be in the very earliest stages of the disorder. Attention to the points already detailed will almost always enable the diagnostician to arrive at a rapid and correct conclusion.

Having determined that our patient is suffering from organic spinal disease, it must be our next endeavor to make out the nature of the lesion. The organic causes of paraplegia are diseases of the bones, of the membranes, and of the cord. On examining the spine of the patient we find that it is free from any irregularities and that no evidence of tenderness is elicited by direct pressure or by tapping the patient on the top of the head.

Rosenthal's test of spinal caries consists in passing a pair of electrodes attached to a faradaic battery of some power down the back, one pole being placed each side of the spine. Under these circumstances, if there be any caries or inflammation of the vertebræ, the moment its locality is reached the patient starts or screams from the burning, sticking pain caused by the passage of the galvanic current through the inflamed tissue. I have not found this test as trustworthy as its originator claimed it to be, and as, apparently, it ought to be. I have seen the local pain produced when the cord and not the bony canal was the seat of the disease. In such cases, however, the pain is probably not so severe as where there is commencing or advanced caries of the vertebræ. Moreover, absence of the pain in any case seems to be conclusive evidence of the non-existence of bone-disease. Our patient fails entirely to respond to this test. As, then, there are no discoverable local indications of the presence of diseases of the bony envelopes of the cord, and as there are no constitutional evidences of a scrofulous or syphilitic taint, I think we may narrow the possible seat of the lesion to the cord and its membranes.

The diseases of the membranes and of the cord are as follows:

MEMBRANES.

Congestion.
 Hæmorrhachis.
 Acute meningitis.
 Chronic meningitis.

CORD.

Sexual exhaustion.
 Acute myelitis.
 Chronic myelitis.
 Spinal apoplexy.
 Tumors.

This arrangement of these diseases is a clinically convenient rather than a strictly accurate one. In the so-called congestion of the membranes, the cord is probably also congested very deeply. Further, tumors of the membranes produce the same symptoms as tumors of the cord, and are here included under the general heading of tumors of the cord.

It is plain that in the present instance we may exclude all diseases which are acute in their course or in their onset. This diminishes our possible selection to chronic meningitis, spinal exhaustion, chronic myelitis, and tumors.

That the man is not suffering from a spinal tumor is proven by the condition of the reflex movements. Somewhere at the base of the brain is situated a nerve-centre which controls, or, in other words, inhibits the reflex activity of the spinal cord. Hence, when the vivisector divides the cord of the animal, the reflex movements in the hind legs are greatly increased, and when in man the continuity of the cord is interrupted by the knife of the assassin, or by the growth of a tumor, parallel phenomena result. As reflex movements are not, and, so far as we can learn, never have been, in our patient greater than normal, we dismiss the idea of a tumor. The possible diagnosis has thus been limited to chronic spinal meningitis, sexual exhaustion, and chronic myelitis. Is our patient effected with the first of these?

Think a moment of the anatomy of the spinal membranes; excepting the fine, hardly existing pia mater, their relations with the spinal cord are not very intimate, whilst they are brought into the closest union with the spinal nerve-roots which pierce them; consequently, when the membranes are inflamed, the nerve-roots feel much more than the cord the effects of the disorder, and soon come to share in the inflammation; frightful pains and no less frightful spasms, darting and pirouetting through the limbs, mark the excitement not of the membranes, nor of the cord, but of the spinal nerve-roots. No paralysis can appear until sufficient exudation to abolish nerve-function by pressure has taken place. In chronic spinal meningitis very rarely, if ever, is the exudation sufficient to do this, and, consequently, pain and spasm predominate over paralysis even in the advanced stages of the disease. The legs of the patient are not extended and flaccid, but drawn up upon the body, with the muscles hard and tense, and extension impossible, except by application of external force, and then very painful. Plainly, our patient is not suffering from chronic meningitis.

Of chronic myelitis there are two chief varieties—one ending in hardening of the cord, the other in the developments of spots

of softened tissue. In the first of these, *sclerosis*, the whole cord or any portion of it may be affected. The process is very similar to that which occurs in cirrhosis, of the liver, consisting essentially of an excessive nutritive activity or chronic inflammation of the connective tissue of the cord, giving rise to a great increase of this tissue, and finally a destruction of nerve-cells and tubules by pressure. This process is essentially a very slow one, and for a long time is associated with a condition of hyperæmia and functional excitement of the spinal centres; hence, frequent local spasms, with or without darting pains, according to the position of the lesion, precede, and often co-exist with, the earlier stages of the paralysis. It is also evident that there must be, during the earlier portions of the disease, an exalted state of reflex activity; moreover, in the majority of cases of spinal sclerosis the membranes share the disorder, and, from the resultant irritation of the nerves, pain and spasm result.

In that form of chronic myelitis which results in softening and breaking down of the nerve-tissues, the membranes are rarely affected, and the cord itself is not during any long period in the condition of chronic hyperæmia and irritation seen in spinal sclerosis. Very early in the disease the nerve cells commence a deterioration which lessens their functional activity. For the reasons just given, the onset of this form of chronic myelitis is a torpid one. The spasms, the pains, the heightened reflex movements of sclerosis, are wanting. Not rarely these two forms of chronic myelitis co-exist, when of course the symptomatology is of a mixed character. If the history given by our patient be correct, it is plain that *any chronic myelitis* which may exist must be chiefly of the softening type.

It also follows from what has been brought forward that the man before us has either chronic myelitis or the affection I have denominated sexual exhaustion. Sexual exhaustion is hardly worthy of being recognized as a distinct disease, for the difference between it and myelitis is probably only one of degree. Still, there seems to me a practical advantage in the term. A man abuses his sexual powers, suffers from paraplegia, comes under treatment and gets well, while a second patient under similar circumstances develops an incurable myelitis. There is no reason for believing that the two cases are really anatomically diverse. There is much reason for clinically separating curable and incurable cases.

Let us pause a moment to see how sexual excesses produce spinal disorder. During the sexual act the nerve-centres, and probably especially the lower portions of the cord, are intensely excited. Many of the sexual movements are undoubtedly reflex, and the final orgasm is accompanied by a paroxysm comparable to a spinal epilepsy. It cannot but be that there is an active hyperæmia of the the nerve-centres during the act, and a decided exhaustion of

these centres follows as the result of their intense functional activity. Normally, the congestion subsides and the exhaustion is recovered from without any evil results. But if the act be repeated at short intervals, the repeated congestion exhausts the vessels, so that there is developed a condition of chronic congestion along with a constantly increasing exhaustion. The spinal centres are therefore, placed under the most favorable circumstances for the development of a low grade of nutritive changes ending in degeneration and constituting one of the processes of inflammation. If a case is seen very early, before any decided change has occurred, we speak of it as spinal exhaustion, and the chances of affording relief are good. If, however, the structural degeneration has progressed, then we say the man has chronic myelitic, and the prognosis is very gloomy. Of course there is every shade between the extremes, and it is often impossible to locate exactly a given case.

The patient before us dates his illness to abuse of his generative function; but two years have now elapsed and still the paraplegia slowly deepens. I cannot help believing that he has a chronic myelitis, which will probably resist all treatment. Scattered through his cord are probably spots of destroyed tissue, not sufficient in amount to overwhelm the spinal function entirely, but enough to weaken it greatly. To restore this degenerated tissue, is impossible; it is even very doubtful whether we can arrest the further increase of the lesion.—*Phila. Med. Times.*

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Case of Complete Occlusion of the Vagina and Retention of the Menses, Consequent upon an Abortion—Relief by Operation.

Under the Care of Dr. BRAXTON HICKS and Dr. GALABIN.

Mrs. G., aged twenty-eight, aborted about the middle of the fourth month of her first pregnancy, in October, 1874. No interference was necessary to remove the ovum. She was confined to her bed for many weeks after the abortion, and suffered much abdominal pain. When convalescent, she discovered for the first time that some obstruction had been produced in the vagina. No vaginal examination had been made by her attendant since the time of abortion. In February, 1875, she began to suffer from spasmodic pain in the abdomen, no menstrual discharge having in the meantime appeared. In March she again had recourse to her medical attendant, who passed some instrument (apparently a metal catheter), by means of which a few small clots were liberated. This was repeated several times, but the pain was not relieved, and in June an attempt was made to restore the occluded canal by separating the tissues with blunt instruments and by the fingers.

No anæsthetic was given. On this occasion no menstrual fluid was liberated. About a week after the operation the feces began to pass by the vagina, and this continued up to the time of her admission.

She was admitted into Guy's Hospital on August 25th. The vagina was found to be completely occluded, and converted into a shallow pouch, at the bottom of which was a smooth opening into the rectum, admitting one finger very easily. For the last month the pain had come on only once a day. It was violent in character, and lasted for six or seven hours.

On August 30th Dr. Braxton Hicks commenced the operation for the restoration of the vagina, no anæsthetic being given. The cicatricial tissue was carefully torn apart with a blunt knife by the aid of the finger. Some rather considerable bleeding occurred, and when some advance had been gained the operation was, for the time, suspended, oiled lint being placed in the wound. The patient continued to have paroxysmal pain each day, but it was subdued for the time by the injection of $\frac{1}{3}$ grain of acetate of morphia subcutaneously.

On September 27th, in the absence of Dr. Braxton Hicks, the operation was resumed by Dr. Galabin. The vagina at this time was still a *cul de sac*, barely an inch and a half deep, bounded by very dense cicatricial tissue. Chloroform was given upon this occasion. The fundus uteri could then be felt, somewhat retroverted, but reaching as high as the umbilicus. On being tilted forward, it could be seen to contract powerfully from time to time. A transverse incision was made through the superficial cicatrix, and a passage was then gradually torn by a blunt instrument, a catheter being kept in the urethra. A large cavity was at length reached, having smooth walls. It appeared to consist in the main of the distended uterus, but no os or cervix could be detected. The opening was enlarged to a size admitting two fingers, and about fifteen ounces of dark, treacly fluid (not offensive) were expelled. A pad and bandage were then applied. The same fluid continued to flow away in some quantity until about midnight, but ceased from that time. The evening temperature was 100°, and the pulse 100, but the patient suffered no inconvenience, and from the following day pulse and temperature were normal. The next morning the cavity was injected with a weak solution of permanganate of potash, which brought away much grumous blood. This injection was repeated twice a day.

The opening which had been made showed a great tendency to contract, and on October 2d its dilatation was commenced by the smallest-sized Barnes' dilating bag. This was introduced for a few hours each day, and on the 4th was replaced by the medium-sized bag. On the 8th the canal was so far dilated that the bag could with difficulty be retained. The upper part of the cavity within had now much contracted, and its fundus could just be

reached by the examining finger. At a distance of $1\frac{1}{4}$ inch below the fundus was felt a firm ring of apparently muscular tissue, the length of the whole cavity being $2\frac{3}{4}$ inches. Its lower part showed little tendency to contract, and was made up partly of a pouch extending backward and to the right. Nothing like an external os or cervix uteri could be detected.

The patient still continues nearly in this condition, and the recto-vaginal fistula remains for further operative treatment.

REMARKS.—The operation in this case presented some difficulty on account of the close adhesion which had been formed at the lower part of the cicatrix, between the rectum and the bladder, so that scarcely more than a quarter of an inch of dense tissue appeared to intervene between the rectum and a catheter in the urethra. On this account the recto-vaginal fistula had unfortunately resulted from the first attempt at operation before the patient's admission into the hospital. It was also impossible to discover the position of the cervix uteri, and this would seem indeed to have been entirely destroyed or blended with cicatricial tissue. The shape and the behavior of the lower part of the lower part of the distended cavity appeared to show that it was not composed of uterine tissue, and the firm ring afterwards felt at a distance of $1\frac{1}{4}$ inch from the fundus seemed to correspond to the internal os uteri. The cavity was, therefore, probably made up partly of a remnant of the distended body of the uterus, and partly of a remnant of the upper part of the vagina.—*Obstetrical Journal*.

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Neglected Branches of Medical Study.

When we scan the schedules of lectures in the medical colleges in their busiest seasons, we find an amount of occupation outlined for the whole didactic course, apparently over-sufficient for the grasp of ordinary scholastic minds. If we had not ourselves passed through the same ordeal, we might naturally wonder what time was left for the student, wearied with a continuous train of lectures, clinics, dissections and examinations, to such slight personal attentions as are embraced in the provinces of eating, drinking and sleeping. That the branches taught must be considered by their teachers good and amply sufficient, may be inferred from the fact that the best of our schools have plodded along in the same groove for a number of years, with but little change in the programme. So far as length of study, methods of examination of candidates for graduation, and similar very practical matters are concerned, we have at this moment nothing to observe; these have often been discussed, and are still amenable to a just and rigid scrutiny. It might seem like a superfluous criticism for us to intimate that this mass of learning, which is to be packed away in a winter's session,

has in it any element of insufficiency; and yet it is evident, at the most superficial glance, that several branches which may in due season become all-important to the practitioner, receive no attention at the hands of the lecturer, or are clothed in the scantiest of material to hide the nakedness of their treatment. Notably among these may be mentioned Medical Jurisprudence, Pharmacy and Practical Hygiene, while Chemistry is too often taught tediously in all its non-medical minutiae, its medical relations being accidentally hinted at only when a convenient occasion arises. The History of Medicine is necessarily pushed aside, far out of sight, by the more practical branches, and left as an after-study for the curious and an accomplishment for the professional virtuoso. Half a century ago, however, when the University of Virginia was founded, even this last subject was embraced, with the other neglected branches just named, in the curriculum of instruction. Needing most of these important aids when he settles down to the sterner realities of medical life, the graduate finds when he has most urgent occasion for their service, that some of the tools which he is expected to skillfully handle are rusty from disuse, and that he must hastily get them in order for the emergency in which they are to become of practical utility, after his own untutored fashion, perhaps nervously and imperfectly, at a time when the eyes of a whole community may be fixed upon him. He may be pardoned at such a moment for thinking that the system of instruction which seemed so perfect to him as a student must have been full of glaring deficiencies.

So far as the teaching of Pharmacy is concerned, there is no reason why it should be so thoroughly isolated from the medical courses, and left entirely to the pharmaceutical colleges. Thousands of medical men throughout the country are necessarily their own apothecaries, and many of them travel in a circle as prescribers in the well-trodden footsteps of their routine-loving preceptors, often confining themselves to the employment of a few old-fashioned remedies, merely because they have never had imparted to them during their student-life the general principles of manipulation and preparation of drugs and chemicals. They are only roused to a just appreciation of the claims of Practical Hygiene, when a virulent epidemic, "at one fell swoop," sweeps away their patients and their own reputation as skilful practitioners. They then impatiently overhaul their text-books, and "when found, make a note of it," for the next epidemic, which may never visit them; but their attention has never been excited to the means of prevention of the more common diseases which are daily present at their very elbow. Medical Jurisprudence is shamefully neglected; a mere smattering of information as to its toxicological relations is sometimes acquired in the schools from incidental mention by the teacher of the department of *Materia Medica*, but the great mass of the profession is wofully ignorant of the medico-legal complica-

tions in which practitioners may sometimes be seriously involved. It should be borne in mind that medical experts are not the only ones who are likely to be summoned as witnesses in judicial cases. Every village doctor may some time or other occupy a creditable or a ridiculous position on the witness-stand, according to the extent and variety of his information on questions of medico-legal import. In many of the schools, Medical Jurisprudence is tacked on as a supplement to another branch, in some of them a teacher being in the same session professor of both Institutes of Medicine and Medical Jurisprudence; but, even when so taught, it occupies but a subordinate place, not at all commensurate with its merits, and under such circumstances still deserves to be classed among the almost neglected branches. Occasionally it is offered to slender summer classes as a temporary placebo, but although sometimes excellently taught, it even then does not assume its deserved prominence, and fails to reach in its influences the greater masses of the more important winter classes, from which the ranks of the profession are most numerously recruited.—*Medical Record Editorial.*

OBITUARY.

Died, at his residence in Attica, Wyoming Co., N. Y., on Monday, November 1st, 1875, Dr. M. E. Potter, aged sixty.

Dr. Potter began the practice of medicine at the early age of twenty, having been licensed by the Genesee Co., Medical Society after attending two courses of lectures at the Geneva Medical College. He began the practice of medicine in Bennington Centre, Wyoming Co., where he remained for eleven years; from thence he removed to Cowlesville, where he practiced for nineteen years, the balance of his life being passed in Attica. After having practiced for a few years, and having attained his majority, he returned to the Geneva College and obtained his diploma. Dr. Potter was a member of the Genesee County Medical Society, and of the Wyoming County Society since its foundation, a few years ago. For a number of years he was one of the Curators of the Buffalo College, and almost always made it a point to be present at the Commencement exercises. Throughout the entire course of his professional career he was largely engaged in the practice of medicine, a large amount of which was consultation practice. His ambition was to be actively engaged in practice, and the circumstances of the patient seldom, if ever, had any influence on the promptness of his attentions. Almost his last visit was made to a poor man who informed him in advance that he could not pay for his services.

Dr. Potter left three children, two daughters, and a son, Milton G. Potter, M. D., Prof. of Anatomy in the Buffalo Medical College,

His funeral was attended from his late residence, on Wednesday, Nov. 3d, and

was largely attended by neighboring practitioners. The cause of his death was a serous effusion at the base of the brain.

He will long be mourned by a wide circle of friends and patients. Our deepest sympathy is extended to those who by his death are bereft of a kind parent and a trusted counselor.

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Books Reviewed.

Transactions of the College of Physicians of Philadelphia. Third Series, Vol I. Philadelphia: Lindsay & Blakiston, 1875.

This volume of the transactions of the College of Physicians contains the papers read before that body from April, 1874, to June, 1875, inclusive. The papers are all of them of an interesting and valuable character, and do credit to the venerable body before which they were presented.

They are twelve in number, and are upon the following subjects: Report of an autopsy upon the bodies of the Siamese Twins; by Harrison Allen, M. D. Case of Adenoid (Hodgkins') Disease; by James H. Huthinson, M. D. Case of Fracture of the Neck of the Scapula; by John Ashhurst, Jr., M. D. On a New Operation for certain cases of Cleft Palate and Bifid Uvula; by William S. Forbes, M. D. On the Operative and Conservative Surgery of the Larger Joints; Excision of the Elbow; by John Ashhurst, Jr., M. D. Experiments on the Laryngeal nerves and nerves of Respiration, in a criminal executed by hanging; by W. W. Keen, M. D. On the use of Nitrite of Amyl in various forms of Spasm, and on its value as an aid to diagnosis; by S. Weir Mitchell, M. D. Case of Acute-Tetanus treated by inhalations of Nitrite of Amyl; by William S. Forbes, M. D. Remarks on Diabetes Insipidus and its treatment by Ergot; by J. N. Da-Costa, M. D. Report on the Surgical Consideration in regard to the propriety of an operation for the separation of the Siamese Twins, deduced from the Autopsy; by Wm. H. Pancoast, M. D. Case of Encysted Dropsy of the Peritoneum, in which Suppuration had occurred and Abdominal Section was performed, with recovery; by J. Ewing Mears, M. D. Remarks on the preceding paper; by William. Pepper, M. D. Quinia as a Stimulant to the Pregnant Uterus; by Albert H. Smith, M. D.

The foregoing papers are illustrated by two Chromo-Lithographs, which illustrate Prof. Pancoast's paper, and thirty wood-cuts, nineteen of which illustrate Prof. Allen's article on the Siamese Twins.

The paper by Prof. Pancoast, on the Surgical Anatomy of the Siamese Twins, is a careful inquiry into the propriety of an operation for their separation. From the anatomical observations made, he arrives at the conclusion that no operation could have been made during their adult life, for the purpose of separating them, and their lives preserved, but that it would have been judicious surgery, upon the death of Chang, to have at once applied a strong ligature around the band, as far

as possible from Eng, and then have cut through the band between the ligature and the body of Chang. He regards the question of the success of an operation in the childhood of the twins as problematical; but thinks it would have been the part of wisdom and humanity to have made the effort, using all the precautions employed by Dr. Fatio, in his case in 1869, with such additional ones as might have been suggested.

Several of the other essays demand special mention, but space will not allow the notice which they deserve.

A Treatise on Human Physiology; Designed for the use of Students and Practitioners of Medicine. By John C. Dalton, M. D. Sixth Edition; Revised and Enlarged. Philadelphia: Henry C. Lea, 1875. Buffalo: T. Butler & Son.

It is something less than four years since we had the pleasure of welcoming the fifth edition of Prof. Dalton's admirable text-book of Physiology, but such has been the demand for the work, and so rapid have been the advances in Physiological Science, that the author has found it necessary to prepare a new edition.

The present edition contains an addition of about fifty per cent. over the last, several new cuts have been introduced, and the whole work has undergone a thorough revision. The new chemical nomenclature and notation have been introduced, and the centigrade system of weights and measures is also employed.

It is in the departments of Physiological Chemistry, and of the Physiology of the Nervous System, that the greatest additions have been made.

In speaking of the functions of the liver, he gives credit to Dr. Murchison, whose views have recently been published in the *Lancet*, and elsewhere. The section relating to the glycogenic function of the liver, has not been modified since the last edition. Of the blood, he says, that human blood cannot with certainty be identified by any means now known to medical science; thus repudiating, and very properly, we think, the very positive testimony of Richardson on this point.

The Physiology of the Nervous System is ably considered, and the illustrations which have been added to this section of the work will be found to materially aid the student in his appreciation of the text.

To attempt an exhaustive review of the sixth edition of Dalton's work, would be at this time a work of supererogation. The profession are sufficiently well acquainted with the work from former editions. We can only say that the work maintains fully its high standard as a text-book, and in saying that we can add no higher praise.

On Paralysis from Brain Disease in its Common Forms. By H. Charlton Bastian, M. A., M. D., F. R. S.; Illustrated. New York: D. Appleton & Co., 1875. Buffalo: Herger & Ulbrich.

This work consists of a careful revision of lectures which were delivered in the University College Hospital, and published in the *Lancet*. The lectures are

eight in number, and treat of the common forms of Paralysis, the result of Brain Disease. The lectures thus collected are an exceedingly clear and readable account of the present condition of knowledge of a subject upon which general practitioners, are from necessity, but slightly informed. The lectures upon the apoplectic condition, the difficulty of diagnosis between it and certain injuries, coma, from poisoning, intoxication, epilepsy or uræmia; and the remarks upon the differential diagnosis of Embolism, Thrombosis, and Hæmorrhage, are full of interest, but not more so than several other sections of the work. The author hurries over the subject of Electricity in a few words, which fact is to be regretted, for his observations have doubtless led him to form an unfavorable opinion of the value of this agent, and his reasons therefor would have been of interest. The work is full of interest, is well written, and will be an addition to the library of any Physician.

The Mucous Membrane of the Uterus, with Special Reference to the Development and Structure of the Decidua. By Geo. J. Engelmann, A. M., M. D.; Illustrated. New York: Wm. Wood & Co., 1875. Buffalo: H. H. Otis.

Dr. Engelmann's monograph first appeared in the American Journal of Obstetrics for May, 1875, from which it has been reprinted and presented, in a neatly bound form, to the profession.

The observations upon which this work are based were made in Vienna and Berlin, during the fall of 1871. In these investigations the author was assisted by Dr. Kundrat, first assistant to Prof. Rokitansky. During the course of the investigations over three hundred Uteri were examined, and the conditions of the mucous membrane examined in all its various stages from the time of its first appearance in the foetus down to the period of involution and inaction.

The work is divided into three parts, viz:—I. The Mucous Membrane of the Womb, in its development up to the time of Puberty. II. The Mucous Membrane during its period of Maturity and Functional Activity, from the time of Puberty to the change of Life. III. The Mucous Membrane after the change of Life.

The first part is a careful and minute description of the mucous membrane from foetal life up to the period when it has arrived at functional activity. The author, from the various circumstances of nationality, mode of life, and health of the individual examined, is unable to determine any definite time at which this functional activity commences.

Dr. Engelmann does not receive the views of Pouchet, Tyler, Smith, and others, that the mucous membrane is shed at each menstrual period. Dr. John Williams, in a recent article in the *Obstetrical Journal of Great Britain and Ireland*, gives the result of several observations upon this point, and his conclusions fully support the theory of Pouchet. The author of this work, in fact, does not seem very well settled in his opinion.

The author agrees with Coste and Dalton in the statement that menstruation and ovulation are coincident in point of time, but does not tell us how he will dispose of those cases in which pregnancy has occurred without menstruation; and also those in which a flow exactly resembling the menstrual flow has been observed for some months after the removal of both ovaries. The monograph shows a large amount of careful study of the numerous cases which the author had at his disposal, and although the conclusions reached in some instances conflict with long accepted views, the work will amply repay a careful reading.

Lindsay and Blakiston's Visiting List for 1876.

We are again reminded of the approach of another year by the annual visit of this familiar pocket companion. Lindsay & Blakiston's visiting list is widely and favorably known in the profession as the best pocket record extant.

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Books and Pamphlets Received.

A Text-Book of Human Physiology; designed for the use of Practitioners and Students of Medicine. By Austin Flint, Jr., M. D. New York: D. Appleton & Co., 1875. Buffalo: Martin Taylor.

A Treatise on Therapeutics, comprising Materia Medica and Toxicology; with especial reference to the application of the Physiological action of Drugs to Clinical Medicine. By H. C. Wood, Jr., M. D. Second Edition; Revised and Enlarged. Philadelphia: J. B. Lippincott & Co., 1876. Buffalo: Martin Taylor.

Lectures on Diseases of the Nervous System. By Jerome K. Bauduy, M. D., Philadelphia: J. B. Lippincott & Co., 1876. Buffalo: Martin Taylor.

A Practical Treatise on Fractures and Dislocations. By Frank Hastings Hamilton, A. M., M. D., LL. D. Fifth Edition. Philadelphia: H. C. Lea, 1875. Buffalo: T. Butler & Son.

Phthisis; its Morbid Anatomy, Etiology, Symptomatic Events, and Complications, Fatality and Prognosis, Treatment and Diagnosis. In a series of Clinical Studies. By Austin Flint, M. D. Philadelphia: Henry C. Lea, 1875. Buffalo: T. Butler & Son.

Hints in the Obstetric Procedure. By William B. Atkinson, M. D. Philadelphia: 1875.

Transactions of the Medical Society of the State of Pennsylvania, at its Twenty-Sixth Annual Session, June, 1875.

Twenty-Second Annual Report of the Trustees of the State Lunatic Hospital, Taunton, Mass.

Manitou, Colorado: Its Mineral Waters and Climate. By S. Edwin Solby, M. R. C. S. 1875.

The American Journal of Microscopy and Popular Science. Vol. I, No. I. New York, December, 1875.

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Original Communications.

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ART. I.—*Warm and Hot Water in Surgery. A Short Historical Sketch, with the Present Most Approved Methods of Application. With Cases.* By FREDERICK E. HYDE, M. D., New York.

In 1850, Alphonse Auguste Amussat wrote a thesis upon the "Use of Water in Surgery," (translated by Dr. Frank H. Hamilton, and published in the BUFFALO MEDICAL JOURNAL in 1851), giving an historical sketch of its use from the time of Hippocrates, about 400 B. C., down to his own time, wherein are shown the different periods of its rise and fall in professional favor.

In preparing the following short sketch, I have availed myself largely of Dr. Hamilton's translation above referred to, with a few quotations from Dr. Adam's translation of Hippocrates.

From Hippocrates we learn that in cases of ecchymosis, contusions, stretching and rupture of muscular fibres, in luxations, sprains, diastasis, fractures extending into articulations, etc., etc., after the application of suitable bandages, copious affusions of water are to be prescribed. In luxations of the astragaloss, calcaneum, and in all articular lesions, he recommends warm affusions.

In his Aphorisms, section V.; 22, referring to heat as applied

in the form of hot water, he says: "Heat is suppurative, but not in all kinds of sores; but when it is, it furnishes the greatest test of their being free from danger. It softens the skin, makes it thin, removes pain, soothes rigors, convulsions and tetanus. It is particularly efficacious in fractures of the bones, especially of those which have been exposed, and most especially of wounds of the head and in mortifications; in herpes exedens of the arms, of the privy parts, the womb, the bladder, in all these cases, heat is agreeable and brings matters to a crisis, but cold is prejudicial and does mischief."

In the treatise "On the Use of Liquids," considered to be one of the writings of Hippocrates, we have the same points in reference to the hot water, stated in almost the same words.

In his surgery, he says: "As to the temperature and quantity of the water used, its heat should be just such as the hand can bear, and it ought to be known that a large quantity is best for producing relaxation and attenuation, whereas a moderate quantity is best for incarnating and softening. The limit to the affusion is, to stop when the parts become swelled up, and before the swelling subsides, for the parts swell up at first and fall afterwards."

Speaking of fractures of the forearm, he says: "When you remove the bandages you must pour hot water on the arm and bind it up again." Also in dislocation of the ankle, "At each time that the bandages are taken off, much hot water is to be used, for in all injuries at joints the affusion of hot water in large quantities is to be had recourse to."*

Cornelius Celsus, who lived at the beginning of the Christian Era, and who extolled more than any one else the use of water in internal diseases, and in its external use follows closely the teachings of Hippocrates, says: "A sponge immersed in cold water alone answers in slight cases; but whatever be the liquid with which it is charged it allays pain so long as it is moist, therefore we must not permit it to become dry. In this way we may heal wounds without having recourse to foreign, scarce, and compound medicaments." Farther on he says: "If adhesion has commenced

*F. Adam's Translation of Hippocrates, Sydenham Publication.

and if there is but slight tumefaction, we must adhere to the first kind of dressing; but if inflammation is active, and there is no hope of agglutination we ought to employ suppuratives. The use of warm water is equally necessary to resolve engorgements, to diminish hardness, and to render suppuration more active. The warmth of the water must be such, that the hand when plunged into the liquid shall experience an agreeable sensation, and it is well to continue this application until the wound appears less swollen and has a more natural temperature."

Celsus also recommends the use of water in hæmorrhages, fractures, diseases of the eye, etc.

Galen in the second century in his "Treatise on the Nature and Properties of Simple Remedies," investigates the action of snow and of cold water on the tissues, using in wounds, however, successively warm water, wine, vinegar, recommending especially affusions of warm oils for those cases in which nerves and tendons were implicated.

In the ninth century, Rhazes advises warm water in fractures, and cold water or rose water cooled by ice for burns.

Later, Marianus Sanctus, in a projected but unpublished commentary on the works of Avicenna, intended to teach "a new method of curing wounds, even those of the gravest character, by means of pure water alone only adding thereto certain words, for all the art of medicine consists in words, herbs and stones."

In the sixteenth century, Ambrose Paré, endeavoring to separate superstitious practices from the use of water, says: "I will not omit to say that some cure wounds with pure water after having pronounced over them certain words, and having applied linen cloths cut in the form of crosses and saturated with water often renewed. I affirm that it is neither the words nor the crosses, but it is the water that cleanses the wound, and by its coldness repels the inflammation and the fluxion which might attack the injured part in consequence of the pain. This healing can be accomplished when the wound is in a fleshy part, and in a body young and of good habits, and where the wound is simple."

In 1732, Lamorier read a memoir upon the use of common water for wounds before the "Royal Society of Sciences of Montpellier,"

in which he gives his experience in the treatment of three soldiers; one had an old ulcer on the outer side of the ankle of the size of the hand, another had received a saber blow on the back of the hand, severing all the extensor tendons and separating the fourth and fifth metacarpal bones; this injury had been followed by severe inflammation and abscesses involving the forearm. A third had received a sword cut across the forearm severing the interosseous artery, much blood was effused and extensive suppuration had occurred. For the treatment of the ulcer a copper vessel was constructed for the purpose of immersing the leg, common warm water being used; in this bath the patient rested the limb an hour each day. In a few days the hard borders softened, the cicatrix advanced daily, and he was completely cured. "Two machines of sheet iron were also constructed in which the two soldiers could comfortably immerse the arm from the hand to the elbow. By bathing their wounds in water, suppuration became much more healthy; they were able to move the fingers with greater ease, the pain and the fever diminished daily, in a word, they were entirely cured."

Lamorier was thus the first, as far as we know, to use the prolonged bath in surgery, and with warm water. Gradually the use of the prolonged bath of simple water was forgotten, and it was not till a century later that a Swiss surgeon brought it into notice again.

Cotemporary with Lamorier's use of warm water, cold water was employed in Germany, but applied with cloths kept constantly moist.

"Water," says Gnyot, "is the first, the most powerful, and the most universal emollient, I speak of fresh water in its most simple form * * * * . It is necessary, then, that water should have a moderate warmth, nearly the temperature of the sound body, in order to produce an emollient effect."

According to the French surgeon Louis, "Luke-warm water, is of all medicaments the most simple. Yet we derive from it benefits without number; luke-warm water relaxes parts which are overstretched, opens the pores, the particles of water insinuate themselves into the vessels, dilute the fluids, and increase the

diameter of the small invisible vessels, they facilitate the flow of humors, and open passages to substances which need be expelled. It is for all these reasons that Paré recommends fomentations of luke-warm water in several places, and especially in the thirtieth chapter of the fifteenth book upon 'fractures.'"

The most notable cases of success resulting from the use of water in gunshot wounds, are those reported by Dr. Treille, after the battle of Baylen. He says: "After the battle of Baylen (Andalusia) I remained upon the field the only surgeon to take care of five hundred wounded. Deprived of all medicines, I had all the wounds washed with pure water. I continued my dressings in this way during twenty-one days that we remained upon the battle field, receiving nothing from without but some linen and provisions. As it would be impossible for me alone to have dressed five hundred wounded, I arranged them in three sections and dressed one section each day, and they dressed themselves the two other days. Only seven or eight wounds became gangrenous, and I had but two cases of tetanus.

"When attention is given to the circumstances in which I was placed, it will be apparent what we ought to think of simple water in the treatment of recent wounds. Here were five hundred wounded lying upon the ground from the nineteenth of June to the tenth of July, (1808) under the broiling sun of Andalusia, having nothing whatever for shade but the thin branches of olive trees, deprived of the consolatory hope of ever again seeing their own country, and given up to the mercy of the inhabitants of the Sierra Morena, who were all in arms and highly exasperated.

"In a word, the moral as well as the physical, was but little favorable to the treatment of wounds; I have shown you nevertheless what was my success."

Guthrie recommends cold water compresses in gunshot wounds, but does not consider it an infallible remedy in all cases of inflammation. When it produces disagreeable sensations upon its first application, such as shiverings and stiffness of the part, and when it does not soothe, it is doing harm and warm water should take its place.

Sanson in 1831, says: "With water I have seen cured by fir t

intention contused wounds, accompanied with more or less laceration and stretching of the parts; I have been able to save most persons upon whom I have practised amputations, or other grave operations, from the so-called traumatic fever; indeed, I have been able to cure, without amputation, and even without active inflammation or copious suppuration, many persons having fractured limbs complicated with wounds and projection of the fragments."

A few years previous to 1830, Josse, of Amiens, instituted irrigations as a method of applying water to wounds, that is, allowing the water to flow upon the wound from a vessel placed above it. In 1834, Breschet introduced this method at the Hotel Dieu at Paris, with considerable success.

In his "Operative Surgery," 2d Ed., 1839, Velpeau, who was opposed to the use of irrigations, says: "I think I can predict, after what I have seen, that irrigations will not continue to be used except as an occasional modification of the dressings and in a small number of cases."

In 1841, Charles Mayor published his method of applying baths to all parts of the body, the vessel being shaped to fit the irregularities of the part to be treated. Rubber was applied to the edges of the vessel to prevent the escape of the water. He speaks of the use of warm water only in these baths.

In 1844, Nélaton, speaking of the treatment of contused wounds in his "Elements of Surgical Pathology" thus expresses himself: "Cold water has not always been employed in the same manner in the treatment of wounds: sometimes there is applied upon the wounds one or several compresses dipped in this liquid, and when they begin to become warm they are removed, or dipped again in cold water. This method exposes the parts to alternations of heat and cold, either by a complete omission to renew the cloths, or by their not being renewed sufficiently often; this method has therefore been abandoned, and continued irrigations with cold water have been substituted * * * * * Nevertheless in spite of its advantages, permanent irrigation with cold water cannot be employed as a general method of treatment. All who have employed it regard it as an exceptional method, especially

applicable to contused wounds, and more especially to wounds complicated with fracture, where, as in the case of the upper extremity, the injury is not above the elbow, and in the case of the lower extremity, not above the knee.

MM. Breschet, A. Berard and Pinel Grandchamp have substituted tepid water for cold in irrigation, and the results have been generally satisfactory."

Amussat further states that his father constantly made use of water in the treatment of wounds and complicated fractures, and in fact in most surgical affections and after operations.

He concludes that cold water (50° to 32° F.) applied continuously upon inflamed parts is a powerful anti-phlogistic and sedative, to be used with great caution and discrimination as to the ability of different patients to support it, as, in his own experience it has produced chills, too sudden suppression of the inflammation, and gangrene. It is consequently recommended in the treatment of the young and robust, and to be avoided in the treatment of infants and the aged, for whom water is to be employed at a temperature of 86° to 95° F. Its use is recommended in simple inflammations, erysipelas, burns, ulcers, gangrene, wounds, simple and contused, gunshot wounds, wounds from operations, amputations, etc., hæmorrhages, contusions, affections of joints, hernias, diseases of the eyes, diseases of the genital and urinary organs. This list it will be observed corresponds largely with the conditions for which the use of *warm water* is recommended by Hippocrates.

As to the mode of applying water, Amussat recommends the *water dressings* as a simple means of application, and suitable for superficial injuries, and for those parts that cannot be readily irrigated or immersed. *Irrigations* are more powerful than dressings, but often impossible to apply; when used they are simply superficial in their action.

Immersion, however, has a more prompt and decided effect than either of the other methods, and is advised for the immediate treatment of the most severe surgical accidents, as the water penetrates to the deeper tissues, cleansing the wound, and encouraging granulation. The temperature is to be maintained at about

64° to 68° F., the treatment to be terminated with water dressings.

Within the past few years water treatment has again attained some prominence. Billroth, in his "Surgical Pathology,"* prefers *immersion* and *water dressings* to irrigation, as being more simple and convenient. He has used immersion in both the "continued cold-water bath," kept cold by placing ice in it, and the "warm bath," in the treatment of contused wounds of hand, forearm, foot and leg. "In most cases of these injuries the bleeding is so slight, and ceases so soon spontaneously, that the patient can place the extremity under water very soon, if not immediately, after the injury, without the occurrence of hæmorrhage; but the blood clinging to the part should first be washed off, the water itself be perfectly pure and transparent, and, if it becomes clouded by the secretion of the wound, it should be kept clear by frequent renewals." He considers "that there is very little difference in the effect of the water upon the wound with a temperature varying from 54° to 90° or 100° F., although the higher temperature may induce suppuration a little sooner." He therefore "uses that temperature which is most agreeable to the patient." This, I have observed, is generally from 95° to 100° F. Billroth calls attention to one point in the treatment of the hands and feet which I have observed in my practice. In some persons, after the hand has been submerged for three or four days, an intense burning pain is experienced along the lines of depression on the palmar surface, the intermediate space being swollen into dense, hard ridges, making the water application unbearable. This may be remedied, or avoided, by putting a handful of salt in the water. Whatever the true explanation of the pathology of this condition may be, it would seem to be due to great tension made upon the subcutaneous, inelastic fibrous tissue peculiar to these parts by the swelling of the looser tissue into hard ridges, as also the compression of the nerve terminals, which are so numerous on the palmar surface of the hand and fingers. The addition of the salt to the water causes the ridges to disappear and relieves the tension and pain.

Billroth kept the limb immersed from eight to twelve days, after

*Dr. C. E. Hackley's translation. 1870.

which water dressings, moist cloths covered with oiled silk, were applied till the wound healed.

Billroth refers the methodizing of water treatment to B. von Langenbeck.

As a more complete exposition of the methods and results of treatment by submersion employed during the past few years in Germany, I have drawn largely from a small pamphlet "On Injuries of the Hand and Fingers," by Dr. Max Schede, First Assistant to the Surgical Clinic at Halle.

This paper was published in December, 1871, and although now four years old, it contains many instructive facts and suggestions. Dr. Schede did not use water at a high temperature, and therein failed to obtain all the benefits of water in suppurating wounds. He recommends a temperature, at first, of 20° C. (68° F.) to stop parenchymatous hæmorrhage, which, of course, is eminently proper, but incidentally remarks, "the patients are unable to bear it longer than a few hours, when they begin to feel very cold, and urgently ask for warmer water. Afterwards the temperature is to be raised to 25° to 30° C. (77° to 86° F.). This temperature, it will be observed, is not quite that of warm water, 90° F.

As by the general methods of surgical practice, about fifty per cent. of severe injuries of the fingers, such as lacerated wounds, compound fractures, etc., result in the loss of those members, and as the loss or usefulness of the hand or some fingers is of primary importance to those dependent upon manual labor for their support, it becomes the duty of the surgeon to avail himself of every means at his command not only to retain these members, but also to endeavor to restore their function. With the use of submersion in the water-bath, 100° F., I do not doubt but that this loss may be reduced one-half.

Omitting the minor and simpler lesions and taking up the worst cases only, Dr. Schede, in presenting the subject, supposes the case of a strong man who has had the misfortune to get his hands into the wheels of a piece of machinery. The injury is recent, some phalanges, or one or more fingers, are completely crushed so as to be without any vitality; other parts are less injured, but have been subjected to compound fracture; some joints are opened with or

without dislocation, and the skin is more or less bruised and broken, hanging in flaps or entirely wanting.

The first inquiries of the surgeon naturally are, what must be removed and what might be preserved? Undoubtedly some parts are without vitality, and gangrene will occur; some of the fingers are already gone, and none of the remainder free from injury. Is it advisable to expose the patient to suppuration of the joints and purulent resorption, in the uncertain hope of preserving the use of a finger and a portion of one or two more? If the surgeon decides to amputate he must make his incisions entirely in healthy tissue, and thus sacrifice some portions capable of preservation. If he operates in the injured parts, he leaves tissue which will, in all probability, soon be a source of infection to the whole body. If the inflammatory period sequent to reaction have already occurred, he must wait for the secondary period, or period of suppuration, to arrive. With the water treatment, however, Schede directs the removal, primarily, of only those parts which are utterly destroyed, leaving the subsequent separation of gangrenous portions entirely to nature. The judicious conduct of this process, especially by permanent immersion, entails no more danger than primary amputation. The danger of pyæmia is not increased by this delay, it having occurred but very seldom, even in hospitals, in the course of this treatment. Billroth has observed pyæmia in Zurich but three times in 277 cases, most of which were treated by the permanent water-bath. In Halle, where the hospital is poorly ventilated and badly built, there were but two cases in forty, both of which were infected from some outside source after the wounds were clean and granulating. In the first case pleurisy was the first symptom, and the patient died. The second case was saved by amputation.

As this case is interesting and instructive, I will give Dr. Schede's entire record of it:

A strong, healthy man, aged thirty-two years, had his left hand injured in some machinery, to such an extent as to necessitate his removal to the hospital, June 26, 1869.

A contused and lacerated wound was found extending from the ulnar side of the wrist across the dorsal surface of the hand to the metacarpo phalangeal joint of the index finger, and thence

passing around the palmer surface, across which it extended to the middle of the fifth metacarpal bone. The extensor tendons were partially torn; the second, third and fourth metacarpal bones were fractured in several places, and partially dislocated, the soft parts much separated towards the arm. The metacarpo-phalangeal joint of the index finger was opened upon the radial and palmer aspects, while the skin of the palmer surface was entirely separated, forming a large flap.

As we had previously obtained good results in worse cases with the expectant treatment, we resolved to pursue the same course in this case; the broken bones were replaced so far as practicable, the hand placed upon a shingle and put in the permanent bath.

Reaction was at first moderate; temperature rose in the morning to 38.5° C. (101.3° F.); in the evening it averaged from 39° to 39.5° C. (102.2° to 103.1° F.). The wound, especially upon the dorsal surface, was covered with gangrenous masses. The flap on the palmer surface became attached. On the sixth day the index finger was entirely gangrenous, and was removed at the metacarpal joint, near the line of demarcation, but still in the gangrenous portion. On the eighth day also the second and third phalanges were removed from the second finger.

On the tenth day, the wound was entirely clean, granulations appeared, and the hand was removed from the water-bath and dressed with a solution of carbolic acid, (1 to 100.) The temperature rose the same evening to 40.5° C. (104.9° F.). Next morning a chill occurred, lasting half an-hour. No retention of pus, patient looks somewhat yellow, is covered with cold sweat, general state of health very bad, temperature 40.5° C. (104.9° F.). Amputation of arm near the elbow-joint through healthy tissue, formation of two flaps. The wound is closed six hours later, and the patient removed outdoors. Temperature in the evening 37.2° C. (98.9° F.), pulse 60.

Thirteenth day.—Temperature 37.2° C. (98.9° F.), pulse 76 small, no return of sweat. Evening temperature 38.4° C. (101.1° F.), pulse 60.

Fourteenth day.—Temperature, morning, 38.6° C. (101.5° F.); evening, 39.2° C. (102.6° F.).

Fifteenth day.—Temperature, morning, 38.4° C. (101.1° F.); evening, 39.4° C. (102.9° F.)

Nowhere was there union by first intention, as a small margin of the flaps became gangrenous. Temperature was normal on the eighth day after amputation. Three days later, two abscesses formed in the subcutaneous cellular tissue, one over the right sterno-clavicular articulation, the other in the right natis. Both formed rapidly; the first contained laudable, the other bad-smelling pus. They closed soon, and the man recovered soon afterwards."

Inasmuch as the temperature rose as soon as the hand was removed from the water, should it not have been immersed again immediately that the accession of temperature was observed? and I venture the suggestion that if hot water, 100° – 105° F., had been employed, the infection would not have occurred.

The rule at Halle is to immediately put the wounded hand in the bath, and then to wait till the wound is clean and every gangrenous portion has come away, or at least till the line of demarcation is formed, and the temperature of the patient nearly normal, before removing it. However, gangrenous tissues, loose and devitalized phalanges, or entire fingers, are removed with the scissors, in order to keep the atmosphere of the ward as pure as possible. In some cases it is well at this time to perform any operation that may be necessary to hasten recovery. In others, the exfoliation of necrosed bone is awaited, or the effect of cicatricial contraction is observed, so as to be able to leave but little interference at a later period; although, by this treatment, the postponement of an operation has no danger,

In amputations following the above treatment, Dr. Schede observes that the flaps must be made rather large, on account of the distention and infiltration of the integuments. He has found that the results of these secondary operations are mostly very favorable, the danger only nominal. Union by the first intention generally takes place, if the flaps are carefully united, due to the infiltration of the tissues with plastic material.

The water treatment is of especial advantage in injuries of the tendinous sheaths, which are naturally of frequent occurrence in injuries of the hand, and are of importance on account of the dan-

ger to the patient, and the fact that in healing there is a liability that the sheaths will unite with their tendons, thus destroying the usefulness of the fingers.

The following cases in point, of recent injury treated by submersion, are given in Dr. Schede's paper:

CASE I.—A boy, 14 years of age, healthy, placed a loaded pistol in his pocket, the muzzle pointing upwards; in pulling it out the pistol was discharged, the ball passing through his left hand. The patient was sent immediately to the hospital (1st of August).

The middle and ring fingers, with their metacarpal bones, were shattered to pieces, and completely severed from their carpo-metacarpal articulation, both of which were already open. The tendon of the extensor indicis was exposed over the metacarpal bone of the index finger, and was lacerated, but it was possible to cover it with a piece of skin kept in position by a few sutures. The joint between the last metacarpal bone and the unciform was opened on the radial side; the sheath of the flexor minimi digiti was also opened. The thumb alone was uninjured.

Hæmorrhage was stopped carefully with ligatures, lint applied, the hand fastened to a splint and placed in a water-bath, to which some carbolic acid was added. Reaction was at first quite severe; the temperature rose in the evening to 40° C. (104° F.). After seven days the wound was clean. The hand was then taken out of the bath and dressed with a solution of carbolic acid (1 to 100). No excessive inflammation or extensive suppuration took place. Notwithstanding the opening of three carpo-metacarpal joints, none of the neighboring joints were inflamed; no suppuration of the sheaths of the tendons occurred. The carpo-metacarpal joint of the little finger closed and healed with perfect mobility. Subsequently two small subcutaneous abscesses formed, one on the palmar surface of the forearm close to the wrist joint, the other on the dorsal surface three inches higher up. They, however, had nothing to do with suppuration of sheaths of tendons, and healed soon after they were opened. The patient was discharged September 10th, with a superficial granulating wound, his fingers being still kept on the shingle splint in order to prevent lateral deviation

of the index and little fingers. Both fingers and thumb are capable of active motion.

CASE II.—A young man, 19 years of age, injured his hand severely in machinery July 7th, 1869, and was brought immediately to the clinic. A smooth incised wound was found, beginning one inch from the right wrist-joint and passing arch-shaped over the dorsum of the forearm, entering and opening the wrist-joint. All along the wound *all the extensor tendons* are cut through. One artery had to be tied. The hand was flexed moderately, placed in a splint and put in the permanent water-bath. This treatment was continued for two weeks. The wound healed by first intention, except the point through which the ligature passed. On the dorsum of the hand an abscess formed, the only one in this case, otherwise there was no extensive suppuration. August 20th, the wound is completely cicatrized. In the beginning of September, cautious, passive motions of the hand were made for the first time, and to a moderate extent without pain. The fingers were quite stiff, having been kept immovable for so long a time, but they soon gained their former mobility. Active motion was soon commenced with the wrist-joint, but unfortunately the patient had to be discharged too soon, and not being careful enough, ankylosis of the joint occurred which might have been avoided.

The next case concerns more the arm than the hand, but will supply additional testimony in favor of submersion.

CASE III.—A healthy man, aged thirty-two years, received an injury of his left hand and forearm from a cogwheel, the impressions from the teeth of the wheel being visible at regular intervals along the entire arm. They are mostly superficial, except upon the anterior surface of the forearm, where they are quite deep, and along the middle portion perforations having been made through which muscles and tendons protrude: between the perforations there are spaces of intact skin.

No bone being injured, it was a question whether to amputate or attempt conservative treatment. Probably the larger portion of the flexors would be lost. Possibly a movable thumb might be preserved to the patient subject to the action of its short muscles.

It was finally resolved to try and save the arm. It was placed on a splint and put in the water-bath.

During the next six days great masses of gangrenous tissue came away. The skin mortified to a greater extent than was at first anticipated. The loss of skin is five by three inches. All the flexors, with the exception of the flexores carpi only, have sloughed and are about to come away.

After fourteen days the wound has become perfectly clean. A piece of the median nerve had mortified. An abscess had formed on the upper arm in consequence of the primary contusion, but it soon closed after incision. Otherwise no extensive suppuration occurred. The patient is able to flex and extend the hand; unfortunately, he can move the thumb no more than the fingers. The arm was removed from the water and treated with water-dressings.

Eight days after removal from the bath the patient's temperature was normal, and he left his bed. Cicatrization now advanced rapidly. The tendency of the fingers to flexion is counterbalanced by dorsal splints.

Unfortunately, the patient's family affairs compelled him to leave the hospital too soon. At this time, nine weeks after the injury, the wound was only about one inch and a half in diameter; the fingers were a little movable, probably by the lumbricales muscles; the thumb was immovable and entirely useless.

These cases show what good results may be obtained in very severe injuries by the use of continued submersion.

In some general directions for the use of the water-bath, Dr. Schede observes that it is of use only in recent cases, and that if suppuration is already established, and especially if canals and cavities have formed lodging pus, he says: "It is not only not favorable, but also pernicious. Wounds in this condition placed in the water-bath could neither be kept clean nor free from the secretions. The soft parts and the granulations swell, the openings are diminished in size, and narrow canals closed. Even if free openings are maintained, pus will not flow out freely; as the water coagulates it, it is retained in the wound, and finally decomposes. The granulations become œdematous, assume a pale, smooth appearance, and are unfit for cicatrization."

When Dr. Schede wrote the above, it must be remembered that he was using water at a temperature at the highest, of 30° C. or 86° F. only. Our experience at the present day with hot water is, that just such cases can be treated successfully by submersion; as instance, Dr. Hamilton's "Case XI" in the following pages, in which erysipelatous inflammation and gangrene had occurred before submersion; and the following two cases, which will suffice to demonstrate this point.

The first, which Dr. Hamilton has kindly furnished me, is from his private practice, and is as follows:

Mrs. A. B., aged about 60, had plunged an ice-pick into the interdigital commissure between the ring and middle fingers of one of her hands. Inflammation having been set up, she commenced the application of ice; this she continued assiduously for several days, the inflammation meanwhile progressing steadily.

On about the seventh day, poultices were substituted for the ice. About the ninth day, the case was seen by Dr. Hamilton. The whole hand was found to be inflamed, and suppuration had already commenced. It being, however, late at night, and the operation of incision exposing somewhat to the danger of wounding important arteries, it was determined to defer the opening of the abscess till the following morning; but as she was suffering greatly from a burning or scalding sensation, as she expressed it, she was directed to keep the hand immersed in water at a temperature of 100° F. or above. In the morning, although no matter had escaped, she remarked that her hand was almost free from pain, and that the scalding sensation had entirely ceased the moment she had submerged the hand in the hot water.

Dr. Hamilton opened the abscess, which discharged a considerable amount of pus, and submersion, alternating with hot-water fomentations, were continued.

Two weeks later submersion had been discontinued, and fomentations only were being used; the swelling had gone down and the wound was healing.

The second case occurred in the private practice of Dr. A. Rose, of this city, who has kindly sent me the history of it, as follows:

Fracture of the left malleolus externus; abscess of the leg; necrosis of the fibula with sequestrotomy; sero-fibrinous synovitis of the tibio-tarsal articulation; chronic periostitis of the right clavicle.

Mary Wey, four years of age, fell from a wagon on June 29th, 1875. The physician who first took charge of the case thought he recognized a fracture of the external malleolus, though he was not positive. He applied wooden splints and bandaged the leg; gave internally quinine and calomel. While thus bandaged the child suffered considerably, and the splints were therefore removed July 2d. The suffering continued, and I was called to see the patient in consultation July 3d. Found the foot turned inward, very much swollen and painful; high fever. After correcting the position of the foot, I applied a plaster-of-Paris bandage; cut it open all along the dorsum of the foot and anteriorly along the leg, and suggested that the limb should be kept in a raised position higher than the rest of the body, that ice should be applied at the ankle-joint and quinine freely given. When I left the child felt, or appeared to be, very much relieved. On July 7th I was again called, when I found the child apparently suffering the most excruciating pain. The leg had not been elevated, no ice was applied. I widened the bandage, which was pressing at some points, raised the leg according to the old teaching of Celsus, and the now famous recommendation of Volkman concerning inflammation of the joints, and again had the satisfaction of seeing the child relieved.

July 9th, I called again, and at the request of the physician who had attended the case so far, I took charge of it entirely. Removing all bandages, I found that since my last visit phlegmonous inflammation had developed extensively along the outer side of the leg, and fluctuation could be felt. I made an incision, through which an enormous amount of pus was discharged. I placed the limb in a warm-water bath, and had the satisfaction of finding it promptly relieved from pain. The submersion was continued day and night for four days, until the child began to dislike it, by which time the phlegmonous inflammation had disappeared. It was most interesting to see how the water had separated the gangrenous tissue from the healthy parts, and washed it from the wound, leaving the

healthy tissues with a bleached appearance. The wound soon filled up with healthy granulations, a new plaster bandage was applied, and when it was removed at the end of the fifth week after the receipt of the injury, the foot was found to have resumed and to have retained its natural position; in the region of the ankle-joint there was some expansion, but altogether the process of healing seemed to be going on favorably.

After about another fortnight, it was found that at the lower end of the cicatrix of the incised wound there appeared a fistula, and later, at the other extremity, another fistulous opening. By means of a probe introduced I discovered necrosed bone, and as soon as movable, kindly assisted by Dr. Hyde, I removed through the lower fistula a portion of the necrosed fibula five inches in length. The sequestrotomy was performed September 8th. All wounds now closed promptly, but about the 20th of September a little circumscribed swelling appeared over the external malleolus; it was fluctuating, opened spontaneously, and discharged a small quantity of sero-fibrinous matter, the nature of which and the point from which it came made it evident that sero-fibrinous synovitis had developed. Since the removal of the necrosed fibula the patient has suffered but little pain.

For some weeks after I first had charge of the case there was bronchitis present which alarmed me considerably; she had been coughing for nine weeks. I ordered quinine and iron, and stimulated as much as possible. A most peculiar incident in the case was the appearance of a periostitis of the right clavicle, which was noticed shortly after the occurrence of the accident. The periostitis is still persistent, and does not seem to be painful, though for the past few days I have noticed that the swelling has become red, with temperature increased.

Dr. Rose adds in his note to me that, notwithstanding the synovitis at the ankle-joint, the child is walking, bearing her weight upon the sound limb and balancing herself by just touching the toes of the injured foot to the ground. He does not care to keep her in an immovable apparatus indoors, as with a simple roller about the limb she goes out, gets the air, and is improving in general health, to the advantage of the diseased joint.

Dr. Schede insists that the hand shall not hang down in the water, but that the entire forearm must also be submerged, the hand and elbow being at least upon the same level. He finds submersion from six to eight days sufficient, as a rule, for the hand and fingers, at the end of this period the granulating process or exudation of plastic lymph is so far advanced that the limb may be removed from the bath. "It has accomplished its purpose, it has helped to carry the patient over the period of acute reaction, and establish a healthy action in the wound, and its further use would unnecessarily prolong the healing process."

I have observed, however, in the treatment of severe injuries of the lower extremities, that it has generally been found advisable to continue submersion for a longer period than six or eight days, fourteen days being about the average time required, and occasionally longer.

Hueter, of Graefswalde, in his work on "Diseases of the Joints," 1871, speaking of the action of cold and heat, says: "Cold interferes with the process of resorption of inflamed products, and must not be applied if the object is to promote such resorption. If we are treating a joint already inflamed for several months, the process of healing can only be accomplished by the fatty degeneration and resorption of the inflammatory new formation, and of the hydropic synovia, and it is not apparent why the ice should be continued. At most, it will neither retard nor encourage this process, for resorption is brought about by a stimulation of the lymphatic system, which requires a high pressure in the blood-vessels. By this pressure a more active circulation of the nutritive fluid is obtained, and supplied more freely to the lymphatics, and thus, physiologically, warm applications are indicated instead of cold. Cloths moistened in warm water, enclosed with a bandage, if pressure is required, and covered with some impermeable material to keep the temperature, are the most advantageous means to be employed in these inflammations."

Further on, Hueter says: "That neither the warm water-bath nor the ice are sovereign remedies; they both have their place in the reduction of inflammation. When used unintelligently, however, they may both be harmful."

“Warmth is an antiphlogistic indirectly. In some cases, one might think that ice would be selected for its anæsthetic action, where, as the result of experience, warmth is to be preferred. As when we find intense pain, no local or general increase of temperature, and no swelling; and where we must suppose a neuralgia of the synovial membrane; ice is not tolerated, no improvement is obtained, and the pain is actually increased.

“Now, what is the explanation of this? It is difficult to answer; but from experience it may be said, that in such chronic inflammations of joints with very little swelling, no increase of temperature and very great painfulness; where the ice acts neither as antiphlogistic nor as anæsthetic, it must be substituted in either case by warmth.”

In his “General Surgery,” published in 1873, in presenting his view of the action of warmth in connection with hyperplastic inflammation of the deeper tissues, Hueter says: “As soon as they have come to a chronic condition they will give us a double task to perform: 1st, to do away with the danger which is apt to befall the seat of inflammation; and 2d, as soon as suppuration has occurred, to promote the resorption of the hyperplastic formation.

“For resorption of hyperplastic inflammation, ice is of no use. The reduction of temperature causes a contraction of the small arteries, and their reduced capacity will allow but a small quantity of blood to reach the centre of inflammation, supposing, of course, that the cold will reach the arteries of the deeper tissues.

“Now, what is gained by anæmia of the smaller arteries, in the diminution of the extent of inflammation, is lost by the obstruction and retardation of the circulation in the veins, and especially of the lymphatic circulation. The cells of the granulation tissue, and the nutritive fluid which is collected in and between them, having their natural and most important return channels in the lymphatics, will circulate more easily with a high arterial pressure than with a low pressure. The arteries and capillaries being dilated by the application of heat, assisted by the action of the heart, the blood is caused to flow into them in increased quantity, thereby favoring the transportation of the nutritive fluid into the

lymphatic vessels; therefore, warmth is to be reckoned among antiphlogistic means, at least in the chronic state of hyperplastic inflammation."

TO BE CONTINUED.

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ART. II.—*Chronic Dislocations of the Shoulder. With Observations upon the Manipulation Method in Reduction of the Shoulder Dislocation.* By W. W. MINER, M. D.

The first and greater portion of this article was read as an essay before the Buffalo Medical Association on November second, 1875. In offering it for publication, it is my pleasure to acknowledge my indebtedness to my uncle especially, and to my father, both mentioned herein, for many important opportunities of observation of the reduction of old dislocations, as well as for many ideas I have advanced upon this subject.

The histories of two cases are here presented, of chronic dislocation of the humerus, in whose restoration I assisted, which have not been reported and which present some points of interest differing from those of other cases with which I have had to do. Following these, are remarks upon such cases in general: I add in conclusion, some observations I have gained from dissecting room studies respecting the reduction of the shoulder dislocation by the manipulation method.* Little is said by authors of surgical works on the subject of chronic dislocation of the shoulder, and personal experience in this respect, is of more than usual interest.

CASE I.—J. S——, an Irish laborer, aged about forty-five, came to Dr. J. F. Miner, from Chautauqua county, with a dislocation of his right shoulder. He was suffering considerably from pain and

* Report of a Case of Reduction of a Shoulder Dislocation of seven months standing, by Prof. J. F. Miner, in which I assisted, also of a Congenital one of eleven months, is given in an excellent article by Dr. E. N. Brush, in the BUFFALO MEDICAL JOURNAL for October, 1875, and reference is therein made to other like cases by Dr. Miner, reported in that publication.

numbness. It was four weeks since the injury had occurred. Ineffectual effort at restoration had been made a short time before his coming here. He took quarters at the Sisters of Charity Hospital, and with others came before an invited assembly of Alumni and friends of the Medical College, for operation, on February twenty-third, 1875. He had entire immobility of the arm, a flattened shoulder and constant harassing pain through the length of the limb. The diagnosis of sub-glenoid dislocation was made with unanimous consent.

Anesthesia with ether being thoroughly procured, Prof. J. F. Miner selected assistants from the company and proceeded to accomplish reduction. The patient was lying flat upon an operating table, a sheet was made fast at the elbow and entrusted to several for effort at extension in the axis of the arm. Another sheet was made to pass under the axilla, by which counter-extension and traction of the head of the humerus upwards and outwards, was to be sought. The operator grasped the forearm and elbow in his hands, placed his heel in the axilla, and while extension and counter-extension were being energetically made, he carefully made rotation of the arm. The extension was varied from directly downwards in the axis of the body, to downwards and forwards, the counter-extension varying to correspond. A process of circumduction, limited in area, was carefully conducted in combination with a degree of rotation. Careful pressure downwards upon the acromion was also made. A number of professional gentlemen were vigorously occupied in making the extending and counter-extending force. A giving way of adhesions was repeatedly felt and the bone arose to its place without marked suddenness of movement.

After the sheets for traction were removed, the shoulder beneath the acromion, was found to have gained rotundity, though not quite to the degree which was thought naturally present. It was, however, such in degree as had been before noticed to be present immediately succeeding restoration in such cases. It was the opinion of the profession present that reduction had been made. On motion of the arm, which was free and unobstructed, there was now present a grating sensation, as of the rubbing to-

gether of roughened joint surfaces, which was very manifest to those who made after examination of the limb. It was considered that inflammatory deposits of more than usual abundance had occurred and hindered perfect apposition of the joint surfaces, and that this, with an atrophied condition of the deltoid, explained also whatever defect of contour there was in the shoulder. In order to have incontrovertible evidence that the dislocation was reduced, I tried what is known as Dugas' test, brought the hand to the opposite shoulder, and even to the head. There was no ground for the question of fracture, I was entirely satisfied that the shoulder was as near its normal condition as the fibrinous deposits upon the head of the humerus and the glenoid cavity of the scapula, would allow.

His elbow was bandaged to his breast to avoid all danger of re-dislocation and motion thus prevented for a week afterward. The bandages were then removed. He was entirely free from the pain and numbness he had had. Though the deformity of his shoulder was such on entrance to the Hospital that his condition was diagnosed by the hand, before his clothes were removed, there was a scarcely noticeable want of fullness now. The man was one who thought very little about his arm in comparison with being hurt, and therefore the motion I made was restricted somewhat, still it was sufficient to show me that there was a satisfactory condition in this respect. There was present likewise the same rubbing, grating sensation, as distinctly felt on moving the arm, as before. It gave the patient no pain to produce this rubbing movement, and he was altogether free from pain when let alone. I advised and urged him to make passive motion of the shoulder himself by grasping something as high as his shoulder and then bearing down gradually with his weight.

At the end of another week, fearing less through my inability to secure satisfactory motion and his indisposition to this exertion the function of the joint should become permanently impaired, I advocated anesthesia and proper motion of the joint, but this was not brought about. He remained a week or two more, then went home. I trusted that return to his labor would secure him tolerable use of the joint. On May first, two months after the opera-

tion, I found him returned to the hospital, Dr. Cronyn being in charge. The same roughened character of joint surfaces was present, and motion was restricted to quite a small compass. This condition persists at present I have no reason to doubt.

The result here I do not think a surprising one. I had not seen such result occur in other cases. I did not expect it would develop here to the extent it has. There is generally, I believe, a slight impairment of the motion of the shoulder which persists, but which is not of great inconvenience in any of the ordinary uses required of the arm. A case which attracted interest and was brought to the attention of quite a number of physicians of this city, last winter, was one that presented similar characteristics on motion of the shoulder joint to that so plainly noticeable here after reduction. There was markedly manifest on motion of the arm, a roughened, grating sensation, as if irregular surfaces of bone were being rubbed upon each other. It caused question in some as to whether there was not dislocation, or fracture of the head of the humerus; some expressed their opinion that one of these conditions was present. There had been no injury that was supposed at the time to have produced dislocation, there was mobility and absence of nearly all ill effects of dislocation. The elder and experienced of the observers recognized a roughness of the joint surfaces, which though very marked in degree, was such as they had repeatedly witnessed as the result of simple inflammatory action. The condition of roughened joint surfaces in the foregoing case, I take it gave evidence that the inflammatory action accompanying the dislocation was of unusual degree of severity and ought to have indicated particular caution in the after treatment by passive motion.

CASE II.—In the fall of 1870, I assisted Dr. D. W. Miner, of Ware, Mass., my father, in reducing a neglected dislocation of the humerus of six week's standing. The patient was Mrs. J. B—, of about thirty-seven years of age, who had injured herself by falling from a wall. Three different physicians had been in attendance and had consulted together concerning the case, had treated it as fracture of the neck of the humerus, but not having satisfactorily disposed of it, they requested Dr. Miner to visit her.

On arriving at her home in North Dana, some fourteen miles distant, the patient was found to be a fleshy person, who had had since her fall, complete disability in her left arm. She had not had much pain in it, but it was numb, almost immovable, and was kept constantly fixed by her side, with the elbow thrown a little out from the body. There was a depression readily felt beneath the acromion but was not marked in the contour of the shoulder, on account of her fleshy condition.

In reducing the dislocation an apparatus called Jarvis' Adjuster was used. This is a simple contrivance for producing any desired amount of extending force by aid of a rack and pinion movement. One extremity was attached to the elbow on its inner side with bands of cloth, the other having a leathern stirrup with suitable padding, was applied to the axilla. The position of the arm was not thereby changed at all from that it had before maintained by the side and nearly in the axis of the body. After anesthesia was obtained and satisfactory extension produced, the forearm was grasped by the operator at the wrist and elbow, and thus careful motion of the shoulder made. Bands of adhesion gave audible snaps as the extension was increased, and the movements of circumduction and rotation renewed. The bone rather suddenly slid up to its natural position. After removal of the instrument for extension, it was found that there was a noticeable improvement in the appearance of the shoulder. No great importance was attached to the after treatment by passive motion. Three months afterwards the result was found to be entirely satisfactory.

The manner in which the force of extension was applied in the above case, appeared to me unobjectionable, and has some features in which it may at times be more advantageous than others. The force is applied in a way very easy for the operator and can readily be increased or regulated to any desired extent. As little injury is done to the soft parts as by any other methods, it makes no show as of extreme measures. Jarvis' apparatus is not often used because of its limited adaptibility and because professional assistance is usually available. In case the operator has no experienced assistants he could in this way accomplish what he desires without them. I have certainly never seen such an operation performed with greater ease than it was in this instance.

GENERAL REMARKS.—The ease with which reduction of old dislocations is accomplished, I have found varies considerably in different cases. The greatest difficulty was experienced in the case of a blacksmith, sixty years of age, whose shoulder had been out of place for ten weeks. It was only after resolute and fatiguing effort by five or more able men, that the desired result was obtained. The patient had soreness of the arm and felt the after effects of the operation somewhat for a few days, but gained very satisfactory use of the shoulder without any particular care in after treatment. Perhaps the effort required in the case of the laborer whose history I present here; was next in importance. An abundance of help being at hand, it was made use of. In the case of the farmer reported by Dr. Brush, of seven months' standing, which Dr. J. F. Miner reduced a short time since, though the effort was quite energetically made, its amount and the time occupied, was much less than in those mentioned. I accounted for this in the fact that this patient, though owner of a farm, was not as much of a worker as were the others, had not the same brawn of muscle or same degree of ligamentous development. Quite various considerations are necessary in determining the irreducibility of an ancient dislocation.

Complete anæsthesia is as necessary in these chronic cases as in recent ones. In the case of La Montaine, the blacksmith, whose case is reported in the *BUFFALO MEDICAL AND SURGICAL JOURNAL* of December, 1874, after traction had been made in the various direction of downwards, forwards, inwards, very free circumduction was made, while the extension force was held up, with a view to rupturing thoroughly any bands of adhesion that might obstruct the return of the bone. Afterwards when traction was resumed, the patient being on the floor, was at my suggestion turned from his back over upon his sound side and the operator brought the arm backwards, behind the line of the body and made rotation, extension being then downwards, backwards and inwards. This position is I think most favorable for reduction in recent cases, and in this case the return was effected, if not behind, quite near to the line of the axis of the body.

I have seen very strong effort made in this method of reduction,

have had at such times, fears of the accidents that have repeatedly happened in these operations, but I have never myself seen any important ill effect whatever occurring or resulting therefrom.

I believe the method in which the traction was applied in the cases herewith cited is less likely to cause accidents than other methods suggested. For examples I should consider the method advanced by Dr. Kirby, of Dublin, and numerous others open to great objection. By it, traction with pulleys is made outwards, more or less in the line of the axillary vessels and nerve, and if these are bound down by inflammatory adhesions, they would thus be in great danger of violence.

The use of leverage in the long bones, is of limited practicability. Although it is a proper and effectual method for restoration in many cases, still it is often attended with unfortunate results, and should always be employed with discretion. The great mechanical force exerted thereby upon the short end of the bony lever, transversely to the line of its shaft, suffices frequently to occasion fracture of an articular process, at its extremity, (e. g. olecranon,) of the neck, or of the shaft of the bone. Though such an occurrence is sometimes of not great importance in its after results, it may cause a condition worse than that for whose relief the effort was instituted. I have found that direct traction and counter-traction in the line of the dislocated bone, combined also if desirable with moderate pressure or traction with a third band, obliquely thereto, can be made with all the energy that can be judiciously applied towards reduction of joint surfaces; that such effort can be made thereby with the minimum of danger to the bones, and by attention thereto, to the accompanying vessels and nerves.

If fracture of the head of a bone is complicated with unreducible dislocation of the same, I have reason to believe that removal of the head is preferable to other procedures which have been made or suggested.

The remarkably excellent results I have witnessed of late from passive motion, not alone in inflammatory disturbance of the ligamentous structures of a joint, but as well of the synovial surfaces also, has very greatly increased my appreciation of its value and importance.

Last spring while pursuing anatomical studies, I took occasion to observe the shoulder joint particularly with reference to its dislocation. I queried whether it bore any similarity to the hip joint and whether manipulation might not be an efficient method in the reduction of dislocation here as it is in the hip joint. The axillary dislocation is readily produced, with the fingers I found in the cadaver, and especially if the tendon of the deltoid has been severed. The capsular ligament which surrounds the articulation, holds the humerus only quite loosely. The thumb will easily push the head of the bone downwards and forwards into the axilla, when the loose character of the ligaments of the joint is very evident. The only part of the ligaments of this articulation which are of great strength, is that ligamentous band which passes from beneath the coracoid process downwards and outwards to be attached to the groove which marks the anatomical neck of the humerus and at a point near and on either side of the location of the tendon of the biceps muscle. When the humerus is in place this ligament runs obliquely downwards and outwards and is tense; it then prevents extreme eversion of the head. When the humerus is dislocated, the two points of attachment of this ligament, are approximated nearer each other, and this strong band becomes lax and has no more power than the capsular ligament does ordinarily.

By rotating the arm inwards so as to bring the anterior face of the head of the humerus into bearing upon the articular head of the scapula, you secure a position of the humerus favorable to the occurrence of the sliding movement of restoration. Now by carrying the elbow back, you may render tense this strong ligament, the coraco-humeral, and secure thus great power towards reduction. In fact reduction will occur or rupture of the ligament, and this in all ordinary cases would not happen. I believe this is the rationale of reduction by manipulation in the shoulder. The subject has been advocated by Henry H. Smith in this country, and is mentioned with favor by Gross in the last edition of his work.

Since reading the above on November second, before the Buffalo Medical Association, my attention has been called to an article in the *Monthly Abstract* for November, which I take liberty to present herewith:

On the Analogies of Dislocation of the Shoulder and Hip-joints, and the Methods of Reducing them.

Dr. Kocher contributes, in Volkmann's *Sammlung Klinischer Vorträge*, an article in which he bases the methods of reduction of dislocation of the shoulder and hip on the anatomical structure of the joints. He remarks that these joints possess several points of analogy, especially in their ligamentous apparatus. The Y-ligament of the hip-joint, which proceeds from the anterior inferior spine to the linea intertrochanterica, and is connected with the zona orbicularis, has its analogue in the coraco-humeral ligament, which, arising from the coracoid process, divides into two branches, one of which is inserted into the greater tuberosity, the other into the lesser tuberosity of the humerus. From both these branches fibres proceed to the capsule, and perform the same functions as the orbicular ligament. These anatomical analogies indicate a similar mode of reduction. The dislocations of the shoulder and hip are essentially either forwards or backwards.

1. In dislocations upwards and forwards (subcoracoid and ilio-pubic), the special movement for reduction is flexion, which in the case of the shoulder must be preceded by strong rotation outwards, while in the case of the hip this has already been done. After flexion, rotation inwards and extension follow. In the hip, extension follows immediately on flexion.

2. Dislocations downwards and forwards (axillary and obturator) require rotation outwards, which must be preceded by flexion and traction.

3. Dislocation downwards and backwards (infraspinous and sciatic) require rotation inwards, flexion, traction, and finally rotation outwards.

4. Dislocations upwards and backwards (sub-acromial and iliac) require flexion or the utilization of that already existing, traction and rotation inwards.

The methods under consideration are essentially those of elevation and rotation. Elevation serves either for relaxation of the stretched portions of the capsule (the ilio-femoral ligament by flexion, the coraco-humeral ligament by flexion and abduction) or for stretching them so as to form a firm point for leverage.

Irregular and old dislocations require somewhat modified procedures.

The use of chloroform in the reduction of dislocations should be limited, according to Kocher, as muscular contraction may often be useful.—*London Med. Record*, Sept. 15, 1875.

You will notice the agreement of Dr. Kocher's anatomical observations with those I had recorded in my note-book and presented before the Association. The practical deductions of my fellow observer are very finely drawn and the analogies quite attractive. In

my opinion, however, they are not practical in such degree as to be useful.

In the method advocated and practiced by Prof. Henry H. Smith, elevating the arm is the first movement directed. I think this is a mistake. Not only is it impracticable to raise the elbow, in dislocation into the axilla, on account of the pain it causes the patient, but on the cadaver it may be noticed that this movement of the elbow upwards, makes tense the axillary vessels and nerves to an unsafe degree if done as one would infer from the directions. In raising the humerus to a horizontal position, the dislocated head forms a promontory, jutting down below the usual line of course of the axillary vessels and nerve, and the movement up gives a leverage power of tension upon these, which is a source of danger and could hardly fail to cause unfortunate results if extreme elevation was made. In neglected dislocations where fibrinous adhesions limited the elasticity of these axillary cords, of course, the necessity for caution is much increased. Again, it is my opinion that this elevation recommended by Crampton and still later writers, is not necessary.

Lacour's method by which Prof. Gross says he "reduced in a few seconds in 1869, after failure of other means, an axillary dislocation of nearly three months standing," accords with that I found most efficient and advisable. However failure might occur in its use because the backward motion still beyond the line of the body, is not advocated. To describe the movement I would recommend in a way that cannot be mistaken or forgotten—I term it a movement of the dislocated extremity as if one wished to draw his handkerchief from his coat-tail pocket. This tells the whole procedure. In this you notice inversion of the humerus is produced with the object of securing a favorable surface, the anterior face of head of the humerus, for the sliding movement of restoration.

This object can be accomplished by outward rotation, that is, eversion of the humerus, but this is not so desirable or so easily obtained a position. In this backward movement the elbow may be carried as far behind as is required, and the hand even beyond the spine. In this way the coraco-humeral ligament is made tense and powerful force brought to bear towards restoration.

ART. III.—*Abstract of the Proceedings of the Buffalo Medical Association, November 2d, 1875.* Reported by E. N. BRUSH, M. D., Secretary.

Dr. GOULD in the Chair.

Present—Drs. Cronyn, Gay, Little, Fowler, W. W. Miner, Rochester, Brecht, Hebenstreit, Hopkins, Folwell and Barnes.

Secretary's report read and accepted.

The application of Dr. E. C. Coxé was taken from the table and he was unanimously elected a member.

Dr. W. W. MINER read an essay on "Chronic Dislocations of the Shoulder-Joint" (see Art. II).

Dr. J. S. SMITH was appointed as Essayist for December Meeting.

Dr. GAY said that he had seen a case of dislocation of the shoulder, a few days since which occurred at Portage. The reduction had been effected by a local physician. He saw the case two weeks after; good use of the arm had been attained, but there was a depression beneath the acromion process which he attributed to stretching of capsular ligament, produced by failure to apply a bandage.

Dr. Gay also reported a case of dislocation of the left femur in a man fifty-one years old, six feet tall, and very muscular. The dislocation was into the thyroid foramen; it was reduced under ether in from twenty to thirty minutes by a process directly opposite to that employed in dislocation upon the dorsum of the ilium.

Dr. CRONYN remarked that in recent dislocations into the axilla the reduction is generally easy, and is made most frequently by the heel in the axilla. With ancient dislocations the case was different. The case referred to in Dr. Miner's paper as having been reduced before the curators, came under Dr. Cronyn's care in July last. He found the condition of ankylosis and deformity as described by Dr. Miner, and applied, among other means, what is known as Jarvis' adjuster, but without improvement. He obtained motion in the vicinity of the joint, but was of the opinion that in doing so he fractured the neck of the scapula; when this had united the condition was as bad as formerly. With Jarvis' adjuster you can apply any force you desire.

Manipulative measures are sometimes satisfactory and sometimes

are not. Their employment is not new. The paper of Dr. Miner was full of interest, as showing how long after the accident the dislocation can be restored.

Four weeks ago he saw a gentleman, sixty years old, who fell and dislocated his shoulder; a physician was called and said he reduced the luxation; an examination revealed the head of the bone in the axilla. The luxation was readily reduced. The case illustrates the necessity of applying some retentive apparatus.

Dr. WHITE said his experience in early life was large in dislocations of shoulder-joints. Remembered one case which was in the habit, so to speak, of being dislocated. The early theory was that old dislocations could not be reduced; but he early had occasion to doubt this, and to demonstrate its falsity. Capt. Jones, sixty-three years old, came to him on the sixty-third day after dislocating his shoulder. Dr. Hamilton saw the case and confirmed the diagnosis. Succeeded in reducing the luxation by heel in the axilla. This led him to the opinion that old dislocations could be reduced. At a later period, Mrs. S., of Canisteo, came to consult him with a dislocation of ninety-six days duration. The use of heel in the axilla was ineffectual. He then applied what is known as the Spanish windlass. This force being applied, Dr. White manipulated the arm, and in a few moments the dislocation was reduced.

He related these cases, as he had not heard the paper, in confirmation of the grounds which he presumed Dr. Miner had taken, that chronic dislocations could be more frequently restored than was generally supposed. He had seen several which had been dislocated for over one month, but none longer than these.

Dr. ROCHESTER said that the subject reminded him of a case which he was called to treat some time since, and which was subsequently seen by Dr. J. F. Miner in consultation. A very muscular young man fell down a short flight of stairs, striking on the verge of the anus. Dr. Rochester was called on the second day, and discovering something abnormal in the position of the limb, advised that a surgeon be called, but this was objected to. After about two weeks' attendance, he insisted on calling Dr. Miner in consultation. Movement of the limb gave pain, and the thigh

was held in an abnormal position. An examination was made which revealed the fact that the head of the bone was dislocated into the thyroid foramen. The introduction of the finger into the rectum confirmed this diagnosis. Under ether, reduction was made.

Dr. FOLWELL said he had not heard the paper, and would ask what the author meant by chronic dislocation, whether he referred to dislocations of some time standing, or to those produced by disease.

Dr. MINER replied that he meant dislocations of long standing.

Dr. FOLWELL referred to Dieffenbach's case of subcutaneous section of the tendons in an old dislocation of the shoulder.

Dr. GAY read the following paper :

SPLINTS.

On the seventh day of March, 1875, Dextrine was first introduced into the Buffalo General Hospital in the treatment of fractures. According to my best knowledge and belief, this was the first time that dextrine had been used for this purpose in this city. I had long been convinced of its utility, but from some cause or other had postponed its employment until on the day above mentioned. At a visit to the Massachusetts General Hospital during the autumn of 1867, I found dextrine there almost exclusively used for splints. Its use is certainly not new. Velpeau, I believe, was the first surgeon to recommend and employ it for splints. My first patient in the hospital upon whom dextrine was used, had fractured his left tibia one week before dextrine was used for him. His limb had been dressed with the ordinary surgical apparel. All swelling had at this time disappeared when I ordered the use of dextrine.

The article was obtained of Mr. Peabody, the druggist. Its price is so low as to enable the surgeon to use it on his poorest patients, and is so valuable as to induce him to use it also for the more fortunate and rich. Six ounces will be sufficient to make a firm splint that shall envelop the leg from the toes to the knee.

The next patient was Charles Summers, aged 26 years. He slipped on the sidewalk February 27, and fractured his left tibia and fibula at the lower third. Dextrine was not used until March

9th, when the whole circumference of the limb from the toes to the knee was enveloped in a dextrine bandage, which was so firm as to allow of the patient getting up on crutches upon the thirteenth day after injury was received.

A third patient was Lizzie Nash, aged 31 years, who on March 5th made a mis-step descending the stairway, her foot turned inward, and she fell, fracturing the left tibia at the lower third. She entered the hospital, March 9th.

Dextrine was employed on the seventh day from date of fracture. The whole limb from toes to knee was enveloped in the dextrine bandage, which enabled the patient to rise from her bed on the eighteenth day after injury, and go about with the aid of crutches.

From the time of its first employment until the present time, dextrine has been used with increasing satisfaction for most of the fracture cases that have entered the surgical wards of the hospital. When not used, sole-leather, which makes a better splint, has been used in its stead.

PREPARATION AND MODE OF EMPLOYMENT.

The dextrine is first partially moistened with Tr. camphor; warm water is then added until the dextrine is brought to the consistence of molasses. The limb having been bandaged by a single turn of the roller, the dextrine is applied by the hand in the same way that starch is applied in the starch bandage; this done, another layer of the roller is applied, over which another coating of the dextrine is again laid, which, when dry, will be very firm. The dressing is neater, and probably more comfortable and safe; should contraction occur, if, before applying the bandages, a layer of cotton-batting be placed next the skin around the limb. If any more strength of splint is required than the dextrine alone gives, a piece of binder's board may be placed along one side of the limb between the layers of bandage, or additional layers of bandage with thicker coating of dextrine may be used.

EXAMINATION OF THE LIMB.

If you wish to examine the seat of fracture, provided it be fracture of the leg, all you have to do is to cut the bandage or dextrine

splint from the knee to the toes anteriorly. This can be done with an ordinary scalpel, but Henry's plaster-bandage cutters should be used for this purpose. There will be found sufficient elasticity in the splint to enable the surgeon to draw apart the two sides of the splint for the purpose of examination of the limb.

SHRINKAGE OF THE LIMB.

Should the limb shrink away from the dextrine splint in which the limb is confined, a strip of the splint—say one-half inch more or less—may be cut away with the shears or cutters, and then again the borders of the two halves may be brought into apposition. Around the entire splint a roller may be placed, making the splint fit as snugly as though there had been no shrinkage of the limb. It is not necessary in making examination that the limb be moved at all.

Dr. Bartow, the House Surgeon, finding that the dextrine was liable to crumble, obviated this objection to its employment by adding a very little glue to it. The proportion of glue to dextrine being about one of the former to six ounces of the latter, and this quantity will suffice for a firm splint that shall envelop the leg from toes to the knee. Glue corrects the friability of the dextrine, while it does not lessen its resiliency. A splint thus constructed may be likened to a marine shell for lightness and toughness.

EFFECT OF HEAT.

Heat softens the splint sufficiently to enable one to bend and partially mould it. So that in order to adapt the same splint to another limb, all you have to do is to heat it, when it can readily be made to fit another limb, thus economizing material as well as time in the construction of splints.

RELATIVE MERITS OF DEXTRINE, STARCH AND PLASTER SPLINTS

Dextrine in the manner above described, "sets" or becomes dry and firm in thirty minutes, while starch will require nearly twenty-four hours to become dry and firm. Dextrine does not "set" so soon as anhydrous gypsum, but the gypsum is very heavy and cumbersome, contrasting in this respect widely and unfavorably with the light and elegant dextrine. The expense of dextrine can-

not be enough more than the expense of either gypsum or starch as to deter any one from using it, or as to induce one to prefer any other substance in its stead. Its cost at the druggist's is only thirty-five cents per pound. If glue be added, that also is cheap.

Dextrine is more convenient both for city and country practice than either gypsum or starch. It is accessible to all practitioners in city and country. Any one can prepare it for use in ten minutes, and it can be more readily washed from the hands than either gypsum or starch.

PREPARED FOR USE.

Any one can, who likes, have a supply of splints ready for use by taking a plaster of Paris cast of the leg and moulding the splints to the cast, cutting the splint from the cast anteriorly, or both anteriorly or posteriorly, making two side splints.

SOLE-LEATHER SPLINTS.

If there be any splint superior to the dextrine prepared in the way herein described—if I except expensive gutta pereha—it is a splint made of thin sole-leather. The best splints in use since March last at the Buffalo General Hospital are those made of sole-leather. They are called the "Bartow Splint."

Dr. Bartow, the House Physician, not only introduced them, but with the assistance of a convalescent patient, manufactured them at the hospital.

They form a complete mould of the foot and leg; are either made whole, entirely enveloping the leg, or cut, so as to make side splints. In order to make these splints, it is not indispensably necessary to have metalic casts, since plaster of Paris casts of the limb will answer the purpose, provided you only wish to make a single set of splints. It is better to obtain iron castings, however, from the plaster mould. If of a leg, let the casting be of smallest sized leg. Upon this the leather, moistened, is moulded by the hammer and twisted rope. This splint, when perfectly moulded to the casting, is not removed from it, but another splint is made over this one, and the process repeated three or four times until you have splints of different sizes fitting into each other, and making a nest of splints.

The advantage of the sole-leather splint over all others is obvious. The splint is perfectly moulded to the leg, the foot to the prominences of the internal and external malleoli and corresponding depressions. The sole-leather will last any length of time, is not injured by use, and the durability of it adds to the cheapness of it. The cost of manufacturing is absolutely less than the price paid for Day's wooden splints, such as are found in market. Dr. Bartow was led to use the leather splint in the case of a one-armed man who could not use crutches when convalescing from a fractured tibia. The leg was enveloped in a well-adjusted sole-leather splint, which so firmly sustained the leg that the patient was able to rise from his bed in four weeks after injury and walk.

Sole-leather splints have been for a few years used in Bellevue Hospital, New York, but they are not perfectly moulded to the circumference of the limb, as are the splints now in use at the General Hospital.

Dr. WHITE said that he was in the habit, forty years ago, of making splints of cloth and shellac. He was also in the habit of using leather and binder's board. He had found, however, that there was a tendency to return to wooden splints.

Dr. CRONYN said that he did not think there was any department of surgery in which the ingenuity of the surgeon was more taxed than in the form of splints. In almost every fracture that was treated the splint had to be modified in some way to the peculiarities of the case. During the recollection of the present generation of surgeons there had been invented eight or ten different forms of splints, and yet the perfect splint had not been reached.

Dr. WHITE said that the point had been admirably stated by Dr. Cronyn that the surgeon was better adapted fit his splint than the manufacturer.

Dr. BARNES said that he presumed nothing could be added to what had been said. The application of dextrine and leather was not new. Had had some experience in the use of these agents in the hospital. The dextrine and similar agents were liable to change in recent fractures by the change in position of the limb. The limb could not be under the supervision of the surgeon. In a

recent ease of ununited fracture of the tibia, the dextrine failed, but the leather was applied and held the limb firmly, and union took place.

Dr. W. W. MINER said that if the surgeon had the sense of adaptability, which was essential, he could find in almost every household materials from which to make a splint. Saw a ease of a lawyer who was bound to go into court with a fracture of the tibia. It was put up in an immovable apparatus and good union resulted. Where the surgeon has the entire control of the patient he can apply these various plastic splints, and hence they find more favor in hospital than private practice.

Dr. FOLWELL said that he did not think that these were adaptable to compound fractures. Had one ease in which it was applied to a ease of suppurative disease of the knee-joint. The application being made to secure immobility of the limb, the dextrine had to be removed on account of bad odor, the pus burrowing between the limb and the splint.

Dr. BARNES related a case of compound fracture treated with dextrine, which was applied after the period of discharge had passed away. He did not wish to detract anything from the value of this form of splint, and believed that in many instances they were light, well-fitting and of sufficient strength to retain the bones well in apposition.

Dr. W. W. MINER said that a friend who had been experimenting with splints used glue and some metallic oxide, forming a splint of considerable solidity and easy of application.

Dr. GAY said that with these splints the extension could be made of the femur. Experiments had been made which showed that after the dextrine became dry it retained its shape with sufficient firmness to satisfy the demands of most cases.

PREVAILING DISEASES.

Dr. ROCHESTER had seen much influenza of anginous variety, almost being an epidemic of eroup. Had seen within the last two weeks ten or twelve cases. Had seen in consultation one ease which proved fatal, the patient dying with all the symptoms of membranous croup, although he did not think that any membrane was formed.

Had found quinia very effectual, in addition to some alkali, and for this purpose employed carbonate of ammonia. Full doses of quinia were given. To a child three years old had given twelve grains in one hour ; after that giving two or three grains an hour. He had been familiar with the use of quinia in croup for over twenty years, even before the publication of Dr. H. N. Eastman's article in the *N. Y. Journal of Medicine*. Had given it simply in water and sugar.

Dr. HOPKINS said that Dr. Rochester's remarks had suggested to him the method in which medical men could utilize the weather reports. Before the equinoctial storm we had but little influenza, but with the appearance of the storm, the influenza appeared in horses, and later, in human families, following the track of the storm. In regard to the use of quinia in croup, he had come to the conclusion that it must be administered to get the effect, and without regard to size of dose. In one case he had administered to a child two years old sixty grains in twelve hours, during the next twenty-four, forty grains, and one hundred and twenty grains in the course of attack.

He had seen exactly the same phenomena in respiration, pulse, etc., follow the use of Verat. Verid. as that observed in quinia, In both cases aqueous vapor had been used.

Dr. ROCHESTER said that in 1854 he saw a child to whom he gave thirty grains in one night, and in twenty-four hours gave seventy-two grains. Had never used verat. verid., but had heard it well spoken of.

Dr. GOULD said that he depended more upon verat. verid. than anything else ; that inflammation always preceded the membranous formation, and he employed verat. verid. to arrest inflammation.

Dr. HOPKINS remarked that the quinia in these large doses did not produce quininism ; that in the two or three cases in which he had administered verat. verid., he had given the medicine himself, not liking to trust the attendant.

Dr. ROCHESTER said that he could not assent to Dr. Gould's assertion that inflammation always preceded the membrane. In almost all cases of inflammatory croup an exudation was thrown

out, but in the formation of true membrane, the first intimation that anything is wrong with the throat will be given by the presence of the membrane, in the majority of cases there being no inflammatory stage.

Dr. CRONYN said that he entirely agreed with Dr. Rochester. It is well known that upon a mucous surface a fibrinous deposit can not be formed. He was still of the opinion which he advanced in this Association some years since, that diphtheria and true membranous croup were identical. A discussion was at the present time going on in London between Drs. Geo. Johnson, Semple, Sir Wm. Jenner, and others; one party maintaining that membranous croup was always diphtheria, the other maintaining the distinct identity of the disease as membranous croup.

Dr. HOPKINS would like to ask what the nature of the process was which destroyed the mucous membrane and then gave rise to fibrinous deposit, if it was not inflammation.

Dr. CRONYN replied: a condition of irritation, fungoid or otherwise, may arise which attacking the mucous membrane of the trachea, literally dissolves or removes it without an inflammatory process, offering to the vascular surface beneath ready locality for the deposition of plastic lymph or membranous deposit.

On motion, the Society adjourned.

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Editorial.

NEW YEAR'S.—Once more the year draws to a close, and we await the dawning of another, a *New Year*. What it has in store for us and our readers we cannot say, but most heartily do we wish all a **HAPPY AND PROSPEROUS NEW YEAR**. We have been painfully conscious of the fact that our **JOURNAL** has at times been quite tardy in its appearance; but with a supply of good material on hand, and the promise of other valuable communications, we promise better for the future. Owing to the press of material we are compelled to present with this issue more than our usual amount of original matter, and as a consequence several Book Reviews and notices have been crowded out. They will appear in our next.

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Original Communications.

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ART. I.—*Warm and Hot Water in Surgery. A Short Historical Sketch, with the Present Most Approved Methods of Application. With Cases.* By FREDERICK E. HYDE, M. D., New York.
[CONTINUED.]

We are indebted to the Germans for the introduction into this country of the *permanent warm-water bath*, or *submersion*. Who, individually, first employed it, I do not know, but at St. Francis' Hospital in this city where I have mostly observed its effects, it has been in use under the direction of Drs. H. F. Guleke and Achilles Rose, during the past five years. The method of its employment having been more systematized since the publication of Dr. Schede's pamphlet in 1871. I am informed also that it has been in use for some time at Mount Sinai Hospital in this city.

We must, however, express our indebtedness to Dr. Frank H. Hamilton for again, after the lapse of twenty-five years, bringing prominently to the notice of the profession in America the benefits to be derived from the use of water in surgery. Dr. Hamilton has given his views and experience upon this subject, accompanied with the details of several cases, in a paper entitled, "On the use of Warm Water, and Especially by Submersion, in Surgery," pub-

lished in the *Richmond and Louisville Medical Journal*, January, 1874; also in a paper on the "Use of Warm and Hot Water in Surgery, in *The Medical Record*, New York, for May 15, 1874. From these papers I shall quote *in extenso*.

Dr. Hamilton's experience in the use of water, had been with it at a temperature of about 60° F., and with irrigations, following the suggestions of Amussat, but after his connection with St. Francis' Hospital, a German institution in this city, as operating and consulting surgeon, the use of water at a higher temperature was brought to his notice; the beneficial effects of which he had opportunity to observe and appreciate. This experience he put in practice at the Reception Hospitals in this city, of which he was surgeon-in-chief, and also in his wards at Bellevue. From the above institutions Dr. Hamilton has drawn his cases. It will be noticed that the temperature of the water used in the first few cases is about 90° F., but as his experience increased, he raised the temperature to 100° and above, with beneficial results, especially in gangrene. As far as I have been able to ascertain, Dr. Hamilton is the first to use water at the high temperature of 100°, 105°, 110° F. in the treatment of wounds.

In order that these cases may be presented correctly, I will give his own record of them.

CASE I.—*Valgus of Great Toe—Excision of Joint.* A laboring man, aged twenty-four, was admitted at St. Francis' Hospital on account of valgus of the great toe of each foot and bunions. The deformity and suffering were such as to prevent him from walking. After consultation with Dr. Rose, it was decided to make a surgical operation. Accordingly on Monday, April 7, 1873, I exposed the bone opposite the metatarso-phalangeal articulation of the great toe on the right foot, and, disarticulation having been effected, I removed three-quarters of an inch of the distal end of the metatarsal bone with the bone-cutter. The wound was quite large, and the incisious laid open the bottom of the foot where inflammatory infiltrations are prone to occur and to do serious mischief.

No dressings were applied, and soon after the operation was completed, the foot was placed in a water-bath at a temperature

of about 90° F. The bath was continued, with only occasional interruptions at night, fourteen days, and from this time, and whenever the foot was taken from the bath, the wound was kept wet with linen cloths saturated with water and overlaid with oil-silk. No attempt was ever made to draw the parts together, or to hasten the granulations by other means than the use of water. During the progress of the case it was observed that the foot became gradually œdematous, but the œdema was not accompanied with pain, tenderness, redness or other signs of inflammation. The œdema declined rapidly after removal from the bath, the toe gradually and spontaneously took its natural position, and at the end of four or five weeks the wound was closed, the toe still retaining the power of flexion and extension, and the deformity being entirely removed.

CASE II.—*Same as Case I.* On the 2d of June, 1873, Dr. Hamilton operated in the same manner on the opposite foot. The details of the operation and the result are so nearly identical with those recorded in the first operation, that I will not repeat them.

CASE III.—*Same as Case I.* A few weeks later Dr. Achilles Rose made the same operation upon an adult male at St. Francis' Hospital. The treatment and results were essentially identical with those obtained in Dr. Hamilton's cases. There was little or no inflammatory reaction; and the toe finally assumed a position of perfect harmony with the other toes.

CASE IV.—*Resection at the Elbow-joint.* June 2, 1873, I made resection at the elbow-joint, at St. Francis' Hospital, in the case of a man aged forty, for caries of the olecranon and ulceration of the articular surfaces of the joint. The arm was greatly swollen at the time of the operation, and pus was discharging at various points.

Two long and deep incisions were made at right angles with each other over the olecranon process; the joint was exposed ulcerated and dripping with matter, and the olecranon process was removed at its base with the saw. The bleeding vessels having been secured, but no attempt having been made to close the wound, the arm was at once submerged in a bath of the tempera-

ture of about 90° Fah. Almost without interruption the limb remained in the bath during the next fourteen days; until about the tenth day œdema increased steadily along the arm and fore arm, but at this time it began to abate even before the limb was removed from the bath, subsequently it was treated with water applied by means of folds of cotton cloth covered with oiled silk. The wound is now almost closed, and the limb is reduced to nearly its natural size. Flexion and extension are quite free through a space of eight or ten degrees, and motion is unaccompanied with pain.

From the day of the operation to the present moment there has been no sign of inflammatory reaction either in the limb itself or in the condition of the system. The patient has eaten and slept well all the time.

CASE V.—*Lacerated Wound.* On the 30th of June, 1873, James Austin, aged eleven, was admitted to the Ninety-ninth Street Reception Hospital, his leg having been caught between a street car and a loaded wagon while both were approaching each other rapidly. The soft parts above the heel were torn away extensively, making a wound nearly large enough to receive the hand; the tendo-Achillis was gone, the muscles behind the malleolus internus were severed or crushed, the posterior tibial artery was divided, the malleolus externus broken, and the tibio-tarsal articulation completely exposed.

I decided not to amputate, but the boy being exceedingly restless and impatient of treatment, it was thought impracticable to use the bath, Having therefore tied the posterior tibial artery, the limb was laid upon a pillow covered with oil-cloth, and completely enveloped with two thicknesses of sheet lint previously saturated with tepid water, and then enclosed with oil-silk. Great care was taken to cover the toes, foot and leg completely with these water dressings. Essentially this plan of treatment was continued until the wound was closed. On the thirtieth day after the injury a special note of the case was made. The foot was œdematous below the wound, but there was no œdema or swelling from any other cause in the leg above the wound. The patient was quiet, the wound suppurating and granulating finely, but the

joint surfaces remained completely open, and could be seen free from vascularity or other signs of inflammation.

September 29th he left the hospital with the wounds entirely closed.

CASE VI.—*Lacerated and Contused Wound of Foot.* July 29, 1873, Patrick Evers, aged thirty, was received at the Park Reception Hospital, having a few hours before been injured by a locomotive on the New Jersey Central Railroad. The right foot was crushed, and the bones more or less broken nearly in a line with the metatarso-phalangeal articulation. To be more precise, for this is a most extraordinary case in regard to results, the little toe was cut nearly off and broken, the fourth metatarsal bone was comminuted, the first phalanx of the great toe was broken, the integument over the joints was discolored, somewhat torn and swollen, and the bottom of the foot, at a corresponding point, was extensively lacerated. The man had been drinking heavily, and was not yet sober, but he complained greatly when the foot was handled.

Being called in consultation, I said to Dr. Fluhr, the hospital surgeon, whose opinions always commanded my respect, "What do you think; can we save the foot?" To which he replied, "In every case similar to this in which an attempt has been made to save the limb, the patient has died." I added "and my experience has been the same, but I have never seen the trial made by submersion, and I have great faith, from my late experience, that it will succeed." It was decided to try this method. I therefore ordered a bath from Otto & Reynders, and the limb was submerged in water at a temperature of about 100° Fah. He soon complained of this as being too warm, and as causing a burning pain which extended up to the knee. By the addition of ice the temperature was lowered to about 90° Fah. The thermometer was not used, and I cannot therefore be more precise in my statement.

On the 31st July I found the foot considerably swollen, but not painful. He was resting quietly. Five days later I discovered that the gangrene was extending along the top of the foot and beyond the parts originally injured. The circumstance was un-

favorable, and I began to fear that we had made a mistake in attempting to save the foot; but placing my hand in the water, I found that it felt cool, and it was at once suggested that the low temperature of the water was the probable cause of the mischief. The orderly admitted that he had neglected to attend to this latterly with as much diligence as at first. Hot water was introduced and the temperature again elevated to about 90°. Two days later the gangrene was arrested, and the line of demarcation had begun to be formed. On the sixteenth day the foot was removed from the bath; and from this time, until he left the hospital, it was treated with water fomentations alone. Shortly after its removal from the bath a small abscess formed in the sole of the foot, which, being opened, soon healed. It is quite probable that if it had been kept submerged longer this would not have happened.

September 10th, less than six weeks after the accident, he was sent to Bellevue as a convalescent, with the foot nearly healed, and with the loss of only three toes.

CASE VII.—*Necrosis of the Humerus.* July 21, 1873, ———, aged forty, was received at St. Francis' Hospital; I made an incision five inches in length upon the front of the arm a little below its middle, exposing the bone, and with the aid of the trephine and gouge, removed several large central sequestra. The position of the wound rendered it difficult, although not impossible, to use the bath. It was therefore covered with folds of cotton cloth saturated with water, only a pledget of loose lint being laid in the chasm caused by the removal of the bone. The whole was surrounded with oiled silk, and the limb laid upon a pillow.

July 31st. No reaction nor swelling had occurred, and the wound was granulating finely.

September 5th. Wound not yet closed, but slowly closing. Water dressings are still continued.

CASE VIII.—*Lacerated Wound and Fracture of Leg.* Jacob Habers, aged twenty-five, was run over by a street car, August 9, 1873, breaking the fibula of the right leg and causing an extensive laceration of the soft tissues. During the third or fourth day succeeding the accident, the lacerated wounds were dressed with oakum bound upon the limb with a roller. August

13th he was received at St. Francis' Hospital, the whole thigh and leg being greatly swollen, and his general condition exceedingly feeble. At a consultation it was decided that neither the state of his limb nor of his general system would warrant amputation, but that his chance of recovery without amputation was small. Water fomentations were at once applied, as he was too feeble and the leg too much swollen to admit of the use of the bath. These were continued two weeks, when the bath was substituted; the bath being employed, with only occasional interruptions, during the next five weeks. He then returned to the fomentations.

October 1st. The wound is nearly healed, and the patient is completely restored to health.

November 1st. Wound closed.

CASE IX.—*Lacerated and Contused Wound of Foot, with Fracture.* Richard Shay, aged forty, admitted to Ninety-ninth Street Reception Hospital, September 17, 1873, having just received a severe injury of the left foot caused by the fall of a heavy stone upon it. The first and second toes, including the lower portions of the corresponding metatarsal bones, were crushed and broken. The other toes, with considerable portions of the top and sides of the foot, were badly bruised. I did not see him until the third day, at which time the condition was such as ordinarily had been thought by me to demand amputation, since the attempt to save the limb under the same circumstances has generally resulted in death.

The limb was at once submerged in water at the temperature of 90° Fah. No other dressings employed.

September 30th. Found patient with foot still in the bath. Great toe and adjoining toe sloughing off. No extension of gangrene beyond this. Limb very œdematous as high as the tubercle of the tibia. Very little pain or tenderness. No febrile disturbance. Sleeps well. I directed a teaspoonful of common salt to be added to the water every two or four hours, or as often as the hot water is added. I did this at the suggestion of Dr. Rose, hoping to contract the tissues and diminish the œdema.

October 2d. Œdema not diminished. Patient feels well, and

everything appearing favorable, so far as the foot is concerned, it is removed from the water and dressed with water fomentations. November 1st. Wound closed and patient discharged.

CASE X.—*Comminuted Fracture of Leg followed by Traumatic Gangrene.* Amputation. (Full notes of this case were not obtained, but as it presents a new point of interest in relation to the water treatment, Dr. Hamilton gives a brief report of it.)

A German, about thirty years of age, of temperate habits, was run over by a street car, October 24th, the wheel traversing the left leg a little above the ankle. When admitted to the Ninety-ninth Street Reception Hospital soon after the accident, it was ascertained by Dr. Delgado, our experienced House Surgeon, that the tibia and fibula were broken and comminuted, and believing that it required amputation, a message was sent to me. Through some inadvertance the message did not reach me until night, probably eighteen hours after the injury was received. When I arrived the gas had given out, and the amputation was deferred until morning. My second visit was made nearly thirty-six hours after the receipt of the injury, and it was then apparent the favorable period for amputation had passed. The leg was swollen, red and tender as high up as the knee. The intermediate period of inflammation had fairly set in, and it was believed that we should give him the best chance for life by delay, or by tiding him over into the "secondary" period or period of suppuration. There were several reasons which controlled this decision. First, the fact that operations in the period of inflammation are generally fatal. Second, sensation in the foot and toes was only a little less than natural; the integument was nowhere broken, and there seemed to be some small ground of hope that the foot might be saved. Third, I had great confidence in the power of warm water to control inflammation and limit gangrene.

The limb was too much broken to admit of submersion, it was therefore laid upon a pillow covered with oilcloth, and cloths saturated with *hot* water were applied to the entire foot and leg. These were enclosed in cotton batting, and the cloths and hot water were directed to be renewed every hour. The directions

were carried out fully, but the vitality of the foot gradually diminished, and gangrene set in fairly by the second or third day. No change was made in the treatment, and on the ninth day after the injury the gangrene had implicated all the parts originally injured by the wheel of the car, and the foot was insensible, but there was no extension of gangrene above the line traversed by the wheel; the inflammation and swelling had entirely disappeared, and a complete line of demarcation was formed, by suppuration, between the living and dead tissue. The patient's pulse was slow and soft, but he suffered considerable pain in the limb, and was desirous that it should be amputated. The period seemed favorable, and I amputated about five inches above the knee. Incidentally I will say that the amputation was made according to the plan recently suggested and practiced by Esmarch, binding the limb firmly from the toe up with a roller and without a tourniquet. The amount of blood lost was less than I have ever seen in an amputation at the same point.

CASE XI.—*Traumatic Gangrene Arrested by Hot Water Submersion; Spontaneous Separation of Foot and Leg on Ninth Day after Submersion; Recovery.* Hugh Quigley, aged twenty-six, admitted to Ninety-ninth Street Reception Hospital, December 8, 1873, with a fracture of the right leg, caused by the fall of a heavy stone upon the leg about one hour before admission. The bones were broken near the junction of the lower and middle thirds. There was a slight laceration on the inside of the leg, the posterior tibial artery pulsated distinctly. Dr. Delgado, the House Surgeon, applied a roller and placed the limb in a box padded with oakum.

December 9th. A padded leather splint was applied to the outside of the leg and secured by a roller.

December 10th, 4:30 P. M. Foot found to be cold, congested and œdematous; pulse 130; splint and bandage removed, and limb wrapped in cotton batting, with hot bottles.

December 11th. I was summoned. There was then no sensation below the point of fracture; the pulsation of the posterior tibial had ceased; the leg was swollen and erysipelatous to a point some inches above the knee, and gangrene had extended in patches

to about the middle of the leg. It was apparent that the condition of the limb and of the patient were in the highest degree unfavorable for an amputation, which, in case it were made, must be above the knee. Surgeons need not be reminded how seldom an amputation at this period (intermediate), and under these circumstances is successful.

Dr. Delgado, at my suggestion, made several incisions through the gangrenous tissues, and at once placed the limb in a water bath at a temperature of 110° Fah. No medicine.

December 12th. Pulse 112; temperature $103\frac{1}{2}^{\circ}$ F.

December 13th. Pulse 119; temperature $99\frac{3}{4}^{\circ}$ F.

December 14th. Pulse 114; temperature $101\frac{1}{4}^{\circ}$ F.

Swelling of limb above the fracture increasing. Permanganate of potassa and chloride of zinc put in the water as disinfectants. Stomach rejects food; bowels are constipated; appetite poor. Biscarbonate of bismuth *3i. ter die*.

December 15th. Pulse 104; temperature $97\frac{3}{4}^{\circ}$ F. Vomiting has ceased. I saw him to-day for the first time since the limb was submerged. The water in the bath has been changed twice daily. The patient seems cheerful; says he sleeps very well, has no pain in the limb, nor is it particularly tender upon pressure above the line of gangrene. I cannot see that the gangrene has extended at all since the present treatment was adopted.

December 16th. Pulse 90; temperature 98° F.

December 17th. Pulse 96; temperature 99° F.

December 19th. Erysipelas has disappeared, and the line of demarcation is formed near the junction of the lower and middle portions of the leg. This is the eleventh day since the injury was received, and the eighth since submersion was employed. With my forceps and scissors I proceeded to trace the separation, and soon found that all the dead tissues were separated, except a portion of the gastrocnemius and soleus, which latter I divided with a knife low down, and the limb fell off at the point of fracture; the incisions of these muscles causing only a moderate hæmorrhage from very small vessels. These I tied; neither anæsthetics nor the tourniquet were employed. The stump was then covered with warm water dressings, supported by a snug roller.

December 21st. Pulse 92; temperature 100° F. Leg again immersed in warm water.

December 25th. Limb removed from bath. Granulations abundant.

December 28th. Balsam of Peru substituted for water as a dressing.

December 30th. A small abscess was opened which had formed near the knee; discharged about three ounces of pus.

January 24, 1874. I removed the projecting and exfoliated portion of the tibia with my fingers.

January 31st. Patient sits up in his chair two hours daily, and the stump is closing rapidly. It is quite probable, however, that at some future time it will be necessary to resect portions of both the tibia and fibula, in order to give a proper shape to the stump. I have since made resection and the stump is nearly well.

CASE XII.—*Lacerated and Contused Wound of Foot, with Fracture of Bones, Caused by a Car Wheel; Gangrene and Recovery.* Bernard Monahan, aged forty-five, admitted to Ninety-ninth Street Reception Hospital, January 11, 1874, with a compound fracture of the left foot, caused by its having been traversed by a street car a short time previous to admission. The foot below the tarsus was much lacerated, and several of the bones were broken. The right foot was also slightly injured.

On the following day I was summoned to decide the question of amputation. It was determined to employ submersion, in the case of the left foot, with water at a temperature of 100° Fahrenheit. The right foot was enclosed in water-dressings and placed in bed.

January 19th. Left foot œdematous, but not tender or painful. The second and third phalanges of the second toe have dropped off.

January 20th. Patient ordered extras, as food and tonics. Foot taken from bath at night.

January 31st. Right foot is well; left foot is granulating and cicatrizing; water-dressings discontinued and Balsam of Peru substituted.

The condition of the pulse has been recorded each day, and at no time during the progress of the case has it exceeded 80 in the minute. There has been no fever.

CASE XIII.—*Excision of the Head of Metatarsal Bone of Great Toe for Valgus Hallux.* Adult male—St. Francis' Hospital.

Operation.—February 2d, 1874. The patient having been placed under the influence of ether, Dr. Scharlau applied Esmarch's bandage from the toes to the middle of the leg. I then made a crucial incision over the lower portion of the metatarsal bone, rather upon its inner and dorsal aspect. In attempting to pass the chain-saw it was broken, and the section of the bone was made with the bone cutter, in consequence of which the bone was divided irregularly. After disarticulation of the head the bursa was found to communicate with the joint, and the joint surfaces were slightly carious. During the operation not one drop of blood appeared in the wound, but there was a slight oozing of *serum*, which required to be removed once or twice by the sponge. The ligature remained upon the leg about twenty minutes, and when it was removed, quite a free bleeding occurred, which, however, was promptly arrested by the application of carbolic acid water—ten drops of the saturated solution to an ounce of water.

In order to avoid secondary hæmorrhage, the foot was treated with cool-water dressings until the following morning, when submersion in warm water was substituted, and this was continued about two weeks. One small abscess formed and opened upon the top of the foot, about two inches from the wound. In all other respects the progress of the recovery was uninterrupted. March 20th, the wound was healed.

CASE XIV.—*Valgus Hallux—Excision of Metatarsal Bone of Great Toe.* Male, aged eighteen, admitted to St. Francis' Hospital February, 1874, with valgus hallux in both feet, which had existed several years. The right foot troubled him most, the integument over the articulation being almost constantly inflamed. It was decided to practice excision only upon this foot.

Operation.—February 9th, 1874, assisted by Drs. Rose and Scharlau, the patient was anæsthetized, and Esmarch's bandage applied. The incisions were the same as in the preceding cases; no blood appeared in the wound until the Esmarch bandage was removed; the blood then flowed quite freely, but in a few minutes

it ceased *spontaneously*, the total amount of blood lost not exceeding two or three ounces.

The wound was treated with cool-water dressings until the following morning, when the warm-water bath was substituted. The bath was used about fourteen days, and warm-water fomentations were then substituted. March 20th, the wound was closed, and the patient was walking about, the progress of the case toward recovery having been from the first uninterrupted.

CASE XV.—*Lacerated Wound of Hand—Submersion on the Seventh Day—Death on the Thirteenth.* Andrew Bedhman, aged twenty-seven, admitted to Bellevue Hospital, Dr. Wood's service, January 12th, 1874. His left hand had been caught in a "moulding machine" a few hours before admission, and was "terribly lacerated—in short, all torn to pieces." By advice of Dr. Wood, the acting house surgeon proceeded at once to amputate the first and third fingers through the middle of the metacarpal bones, and the second finger at the second joint. Only one or two vessels required the ligature. The hand was then laid upon a splint and dressed with carbolic-acid solution and lint.

January 16th. A consultation was called by Dr. Wood, at which I was present. Hand greatly swollen and wounds gaping, foul and gangrenous: redness and swelling extending above the wrist pulse in the morning of this day, 100; in the afternoon, 120; temperature, 106° F.; respiration, 20; patient very despondent. The period and condition seemed peculiarly unfavorable for amputation, and it was decided to employ warm-water submersion. We subsequently learned that no bath could be obtained until the 19th. On this day (16th) he took quin. sulph., grs. x., at 6 and 9 P. M., also tr. aconite, Fleming, minims ij, at 6, 7, 8 and 9 P. M.

On the 18th he had a slight chill.

January 19th. "Hand begins to look a little better; some healthy discharge" but most of the wound is "still foul and offensive." House surgeon ordered sodæ sulphitis, grs. xv., and quin. sulph., grs. v., ter in die.

January 20th. Some improvement in the appearance of the granulations; pain in shoulder.

January 22d. Opening made above the wrist to let out pus. 23d. Explored again for pus, but none found. 24th. For the first time, the submersion has been continued all night.

January 25th. At 5 A. M. the night watchman, in making his rounds, discovered that the hand was bleeding, "which was arrested by the orderly before the acting house surgeon could arrive (which was in two minutes). Patient had lost very little blood (water in bath hardly tinged), but was terribly frightened." He was informed that he had lost very little blood, but from this moment he failed rapidly, and died about three hours later.

REMARKS.—The records of the autopsy cannot be found, but it is understood that there was no evidence of pyæmic infection. The period at which submersion was commenced—the sixth day—renders it apparent that the water treatment had little or no responsibility for the final result. It is my opinion, founded upon my experience in similar cases, that submersion, practiced from the first or second day after the accident, would have saved his life.

The following is the record of temperature and heart's action from and after the fourth day:

January 16th. (Day of consultation). P. M. Temperature, 106° ; pulse 120.

January 17th. (Fomentations commenced). P. M. Temperature $106\frac{1}{2}^{\circ}$; pulse 108.

January 18th. (Slight chill).

January 19th. (Submersion commenced to-day). P. M. Temperature 106° ; pulse 120.

January 20th. Temperature, $103\frac{1}{2}^{\circ}$; pulse 112.

January 21st. Temperature 106° ; pulse 112.

January 22d. (Incised for pus). Temperature 103° ; pulse 112.

January 23d. (Explored for pus; none found). Temperature $100\frac{1}{4}^{\circ}$; pulse 112.

January 24th. (In bath all night).

January 25th. Died at 8.20 A. M.

TO BE CONTINUED.

ART. II.—*Medical Society of the County of Albany.* Semi-monthly Meeting, Dec. 15th, 1875.

The President, Dr. HENRY MARCH, in the Chair.

Dr. JAMES S. BAILEY then reported the following case of eclampsia occurring during the eighth month of pregnancy. He said: Mary K., æt. 42, Irish, Sept. 20th, 1875, came to engage me to attend her in confinement. She had been twice married. Eight years previous had had one child by her first husband, the labor of which was normal. Her skin was pale and transparent, which led me to suspect albuminuria. Upon examination, I found her feet and limbs swollen slightly.

The next day her urine was found to be highly albuminous. About dark the same day she had an attack of acute pain in the epigastrium. An anodyne procured relief and sleep. Towards day she was seized with eclampsia. I saw her in the second spasm, which was very severe; when this had passed off, she was rational, but could not see.

During the next twelve hours she had four spasms, which left her unconscious, and she was muttering in delirium. She had passed but a small quantity of bloody urine. I gave her bromide of potassium, ten grains every two hours, which relieved the spasms. The administration of ten grains of calomel operated freely on her bowels.

The next day she was rational, but could not see. The pulse was frequent and feeble, with coolness of the extremities. There had been no motion of the child since the first spasm.

September 24. Is rational. Her condition is much improved, and she is inclined to joke, but cannot see. The right leg and arm are swollen considerably, and she cannot use them. The circulation is better. The urine is scant and high-colored. I was enabled now, for the first time, to procure urine for examination, which was solid with albumen. The bromide was continued, and she drank freely of parsley-root tea.

September 25. She cannot distinguish a person standing at the foot of the bed; has passed one-half gallon of urine during the past twenty-four hours.

September 26. Passed one and one-third pints of urine; is improving.

September 27. To-day she realizes the seriousness of her condition, and asks many questions in reference to the probability of passing safely through her confinement without spasms.

September 28. The swelling has left her face and limbs; her vision has improved, and she can now turn over in bed without assistance, and has passed during the day one gallon of urine; treatment continued.

September 29. Says that she is well.

September 30. To-day she sat up for the first time.

October 1. Labor commenced at 9 A. M.; by 12 M. the os uteri was fully dilated; the membranes ruptured, disclosing a foot presentation. The birth was soon accomplished, excepting the head, which was large, and as the fœtus was much decomposed, I feared to make much traction for fear of severing the head from the trunk. The forceps were applied, and the delivery completed by 12.30 o'clock.

There were no more spasms, and she continued to improve rapidly.

Upon relating the case to professional friends, I was advised to immediately induce labor, but as she seemingly was progressing favorably, I determined to wait for labor to set in naturally, and if eclampsia appeared, to deliver at once.

The happy termination of the case, I think, proved my judgment correct.

During the past quarter of a century much light has been thrown upon albuminuria accompanying the lying-in state.

The recent progress of pathology has directed the attention of physicians to the kidneys instead of the brain. Here abundant cause is found for the cerebral symptoms. The great advantage gained from the progress in our investigations has been by way of prophylaxis. Though the mortality continues large, it is a satisfaction to know that death from this cause is unavoidable. It has been my custom to attentively examine the urine of pregnant women engaging my services for accouchment, especially when there were evidences of albuminuria.

During the last five hundred accouchments in which the urine was examined, I find twenty-eight cases in which albumen was found in varying traces. In six of these the albumen depended on the admixture of pus. Deducting these, we have a ratio of one in nearly twenty-two cases. This complication existed in large proportion among primiparæ. For such investigations the urine should always be drawn with a catheter, to insure freedom from admixture from vaginal secretions. The physician learns at last, after patient investigation, and long experience that the urine of pregnancy may present, microscopically, all the varieties and numbers of casts which are recognized in the different stages of Bright's disease, yet after the successful lying-in period has passed these threatening symptoms may entirely disappear, and the patient recover her wonted health.

The difficulty in rendering a correct prognosis is therefore apparent, and here the hopes and fortunes of the younger physician may be wrecked by prognosticating a positive fatal termination, when the experience of riper years would change his opinion, if not make him more cautious in expressing it.

Such cases teach us a valuable lesson; for while we have escaped one difficulty, we are warned of another which may be not far distant. Such serious, renal encroachments are apt to be followed in future pregnancies; therefore, when such is the case, watchfulness and frequent examinations of the urine is demanded. According to my experience, primiparæ are more liable than multiparæ to albuminuric-eclampsia, but the graver consequences are most commonly settled on the latter. Mercurial purges are very beneficial in some cases. I use calomel in full doses, followed with bark and iron, especially when the head symptoms are absent and hydræmia well marked.

The salines for prophylactic treatment have with me answered an excellent purpose, such as Rochelle salts, citrate of magnesia, Seidlitz powders, or even the mineral waters of Saratoga.

The condition of the skin should always be taken into consideration. When there is a hot, dry surface, a mustard pedeluvia given in bed operates speedily in obtaining diaphoresis; then diaphoretics and diuretics come in admirably, and it is always best to select those

that are least stimulating. When there is sleeplessness and excitability of the nervous system, I give bromide of potassium. The tea of parsley root taken freely will, so to speak, wash the kidneys thoroughly, which in my opinion is absolutely necessary to save the patient from the toxical effect.

The points of interest in this case are as follows: The degree of health experienced by her, even up to the time of spasms, she not having suspected any trouble, she said that her health was perfect—that she never felt better. That the poison was sufficient to destroy the child, and yet the mother perfectly recovered.

The variation in the quantity of urine secreted every twenty-four hours is also surprising, varying in quantity from two ounces to one gallon by actual measurement; also in the quantity of albumin contained in the urine each day.

Such cases are rarely met with, especially when recovery takes place. A tabulated statement of the urine is here presented, showing its condition during the most trying period of her sickness:

Dates.	Reaction.	Sp. Grav.	Amt. of Albumen.	Appearances.	Quantity passed per day.	Microscopic Appearance.
Sept. 21	Acid	1015	1.5	Normal		E. R. Epithelium, no casts.
" 22	Alkaline	1030	Solid	Dark Red	2 oz.	Granular and Hyaline casts, E. R. Epithelium, Blood Globules.
" 24	Acid	1015	1.2	"	1-3 pt.	Hyaline and Granular casts, Epithelium.
" 25	"	1013	1.3	Normal	1-2 gal.	Uric Acid Crystals, Epithelium and Granular casts.
" 26	"	1018	1.3	"	1 1-3 pts.	Degenerated Renal Epithelium, Uric Acid, Granular casts.
" 27	"	"	1.4	"	1-2 gal.	Granular Casts, Epithelium, Uric Acid.
" 28	"	"	1.8	"	1 gal.	Granular and Hyaline casts, Renal Epithelium.
" 29	"	"	1.6	"	3 qts.	Hyaline and Granular Casts, Epithelium.
" 30	"	1022	3.4	"	3 pts.	A few Hyaline casts,
Oct. 1	"	1010	1.4	Dark Amber	-----	Blood Globules abundant, Hyaline and Granular casts.
" 2	"	"	1.3	Normal	-----	Blood Globules and Hyaline casts.
" 3	"	"	1.6	Redish Deposit	-----	Blood.
" 8	"	1025	1.3	Normal	-----	No casts, E. R. Epithelium, Blood Globules.
" 18	"	1023	Faint Trace	Amber	-----	Precipitate abundant, E. R. Epithelium, one fatty cast found with Epithelium attached.
" 21	"	1030	"	"	-----	E. R. Epithelium abundant.
" 25	"	1012	Free	"	-----	No casts, but little Epithelium.

Dr. HANNAN enquired what proof the Doctor had that the albumen produced the eclampsia. Might it not be due to an excess of uræa? Did not believe that albumen could produce eclampsia,

and asked how often the Doctor or any gentleman in the room had seen albuminuria in the numerous cases of Bright's disease which had come under their care.

Dr. WM. H. BAILEY asked Dr. Hannan if cold or congestion of the kidney's was not liable to bring on albuminuria.

Dr. HANNAN replied that the kidneys had been removed, and still albumen was found.

Dr. MUNSON enquired how long the loss of sight had continued, and how it came on.

Dr. JAMES S. BAILEY replied it came on suddenly after the first spasm and lasted three days, but now the patient has perfect vision.

Dr. DAVIS enquired how far she was advanced in pregnancy.

Dr. JAMES S. BAILEY said between seven and eight months, at least so the patient said when she applied at his office.

Dr. DAVIS said there are so many interesting questions in the study of eclampsia and no class of diseases are of more importance to the physician. So far as the pathology goes, he was not very well informed, but was taught to consider them as no more dangerous than like convulsions occurring in other diseases.

The treatment should be directed chiefly to the brain, to save the condition of the brain. The Doctor was of the opinion that the convulsion differed in character in resembling respectively hysteria epilepsy and apoplexy. The labor would take care of itself. Our attention should be directed to the convulsions. If the case resembled hysteria treat accordingly. If epileptiform do likewise. If it partook of the nature of apoplexy, bleed. In such a case he thought bleeding the sheet anchor. Such was his treatment and he had never lost a case in his own practice, but had seen death occur from this cause in the practice of others. When the symptoms are relieved, then, if you can, deliver.

Dr. WM. H. BAILEY inquired how Dr. Davis distinguished between the cases?

Dr. DAVIS replied as in many cases of convulsions. The movements are characteristic, somewhat like epilepsy, and epilepsy may resemble apoplexy, but the history of the case the movements of the patient, the character of the convulsions will generally show the nature of the case.

Dr. HANNAN said Dr. Davis referred to Venesection, he would like to know on what principle does a man bleed? If it was to lessen the calibre of the blood vessels.

Dr. C. D. MOSCHER said it is well to make sure of the diagnosis of these cases. The great similarity of the symptoms makes one doubt as to the character of the case. The Doctor was inclined to differ from Dr. Bailey as to the diagnosis of the case under discussion. He thought it rather a case of hysteria than of eclampsia and that any slight shock falling on the system in the condition the patient was it would cause an attack.

The Doctor thought the non examination by the ophthalmoscope was a loss to the diagnosis, and that therefore the loss of vision was a deceptive symptom. The treatment though successful he did not think was the kind to be followed. Bleeding would have been in this case a serious mistake, but judging from the treatment and the result, does not think it a case of eclampsia.

Dr. CURTIS said in relation to the question of bleeding which had been spoken of, he had had lately a chance to see the good effects of such treatment. He saw a case which had been treated by Dr. Boyce when convulsions came on suddenly, six in all, taking place rapidly. The patient had bitten her tongue, and was in the usual condition of such cases. Dr. Boyce bled the patient through a large opening and drew sufficient blood to fill an ordinary tin wash basin. The effect was almost immediate, and when he saw the patient again she could hardly be said to be sick.

The loss of vision he had seen in one case before; it lasted for some days, but passed off without trouble. He hoped some one would say something about the cause of this symptom. In the case of Dr. Bailey he thought the trouble came from the kidneys. Casts showed themselves in the urine which showed the kidneys to be in a state of acute Bright's disease. Roberts states that two-thirds of the cases of acute Bright's disease recover. In this case there were large amounts of granular and hyaline casts and some blood. The Doctor did not think the cause of the convulsions was the albumen but was undoubtedly the circulation in the blood of some substance which the kidneys should have cast off.

Dr. HANNAN said he had bled a patient some thirty ounces and

it made no impression. He doubted also whether urae produces spasms. If anything thinks it is the carbonate of ammonia in the blood. Pathologists, physiologists and chemists have found carbonate of ammonia in the circulation instead of urea.

Dr. STONEHOUSE referred to a case of Bright's disease reported to the Society by Dr. Ullman where there was eclampsia, and also loss of vision.

Dr. STONEHOUSE presented the following case of *Syphilitic Meningitis*:

The Doctor said: J. G. M., æt. 26, applied to a physician in New York City for treatment of an excavated syphilitic ulcer of the throat, but was with difficulty convinced that it was necessary to continue treatment after the cure of the throat affection, and two weeks after that date he broke off attendance before he was dismissed. In three months he returned suffering from syphilitic iritis of both eyes but no eruption.

Before his complete recovery he again returned to his work and discontinued treatment. His physician saw nothing of him for several months when he was summoned to attend a gentleman at a hotel near his office, who had been attacked with hemiplegia of the right side while he was returning to his home in New Jersey, and found his former patient. On the next day I saw him for the first time with his physician, and from his partner who was with him on the train, we ascertained the following history of the three days previous:

He had complained of dull, persistent pain over the anterior portion of the cranium and extending backward midway to the occiput. His face had been considerably flushed, and the conjunctiva very much injected. The head had been quite hot. He had vomited once but a few hours previous to the paralytic attack. He was exceedingly restless, and had not slept any during the four days previous to this attack. The heat of the skin, and the flushing of the face being greatly increased during the night. On the morning of the attack he had talked somewhat irrationally, and his partner was fearful to undertake the journey with him lest he should attempt self destruction. He took the train at 9 A. M., arriving in New York at 12:15 P. M., having been attacked with

hemiplegia fifteen minutes previous to his arrival. At the time of our visit he had rallied from the attack, but the headache, suffusion of countenance and high temperature of the surface were all increased. Active delirium had set in. Curiously he seemed to suffer from no photophobia or morbidly acute hearing, although the character of the two most prominent delusions would appear to indicate their presence. He complained almost continually that his attendants were burning out his eyes with red hot irons, and trying to deafen him by the marvelously loud noises they were making; although, perhaps the foundation for the first delusion was the admission of a little extra light through the door, or for the other delusion the falling of a spoon upon the floor, or the step of a very careful and experienced nurse. His pulse was quick and thread-like; he had great thirst, loss of appetite and obstinate constipation, his bowels not having moved for three days. He was extremely sensitive to the least impression upon his skin, complaining sometimes of the bed clothes. There were twitchings of the facial muscles and irregular movements of the eyeballs.

By my advice mercurial inunction was made in both axillæ, and upon the shaven scalp. An active purgative was administered and the following $\mathcal{R}$ made:

Potassi Iodidi, $\mathfrak{z}$ i.

Aquæ $\mathfrak{z}$ iv. m.

Sig. Cap. $\mathfrak{z}$ i. ter in die.

Cold applications to the head to be constantly applied. In three days I saw the patient again and found him much better. The pulse was slower and fuller, the delirium had subsided, the conjunctiva less injected, and the pain relieved. Paralysis much the same. The mercurial was discontinued and a tonic administered with the iodide. In two days more he was entirely sane, the paralysis disappearing and other symptoms either entirely stopped or much diminished in severity. At the end of a week he called upon me with no paralysis or meningeal symptoms, but suffering from extreme weakness which, however, I learned soon passed off, and the patient had been entirely free from any constitutional manifestations.

Dr. HANNAN enquired what was the proof that these symptoms was caused by syphilis.

Dr. STONEHOUSE answered the only proof is the previous history and that the patient was a very careful man, guarding himself against taking cold. The course of the disease, but mainly the result of treatment.

Dr. VAN DERVEER asked if the patient gave any history of a primary sore?

Dr. STONEHOUSE replied he did to his physician. Had it before the sore throat, but the Doctor said he did not know how long he was under treatment for the sore throat, nor whether the treatment was mercurial.

Dr. MOSCHER asked how long it was since the first attack?

Dr. STONEHOUSE did not know.

Dr. MUNSON asked if the iritis lasted two months?

Dr. STONEHOUSE re-read that portion of the case relating to the history.

Dr. VAN DERVEER said he regretted the history was not brought up to a later date. In his experience he had found these cases required a long course of treatment. The mercurials must be continued for a long time.

Dr. STONEHOUSE said he did not know how long the treatment had been continued but the patient was now well.

Dr. VAN DERVEER enquired how many cases of hemiplegia due to syphilis.

Dr. STONEHOUSE said he did not know; had seen no statement on the subject.

Dr. DAVIS said Dr. Bumstead spoke of a case similar to the one related by Dr. Stonehouse in which there were several relapses. In his own later experience of syphilis he did not rely only on the Iodide of Potassium, but mainly on the use of mercurials.

Dr. VAN DERVEER asked Dr. Davis how soon would he use mercury with a primary sore.

Dr. DAVIS said he would not use it at all with the primary sore, but would wait until secondary symptoms showed themselves.

Dr. MOSCHER said that he had had a patient where similar symptoms showed themselves caused by syphilis. Large doses of the

Iodide of Potassium changing sometimes to the Iodide of Sodium relieved the patient. Sometimes the treatment was stopped altogether, He knew nothing of the history of the patient previous to his treatment of the case about two years since. The patient became insane early and only recovered her mind on taking large and continued doses of the iodide. Judging from that case he thought it necessary to continue the treatment for a long time.

Dr. MUNSON said he considered it important how the mercurial treatment was applied. He thought the best method is by way of inunction and hyperdermic injections. In this way a patient can be brought under the influence of the drug in three or four days.

Dr. STONEHOUSE said that he had seen several cases of insanity from syphilis which recovered under treatment and left the asylum. In his experience the iodide with the use of mercurials by inunction was the best method of treatment.

Dr. WM. H. BAILEY enquired of Dr. Van Derver whether he would use constitutional treatment during the primary lesion.

Dr. VAN DERVER said that he would not.

Dr. HALE said he would like to ask concerning the large doses of the Iodide of Potassium. If 3i. three or four times a day would be allowable.

Dr. MOSCHER said that he had read of such doses being used, but had had no experience in that way. He thought sufficient doses should be used to procure the effect sought.

Dr. DAVIS said he did not know why it was, but he had been unsuccessful in using large doses of the Iodide. When he even got as high as ten to fifteen grains he had trouble from the stomach.

The President referred to the peculiar ptialism which came on after the use of large doses of Iodide.

Dr. STONEHOUSE said the largest doses he had seen given was in those cases when it was administered for the cranial pains.

Dr. HALE asked if 3i. as a dose did not produce gastric trouble, would constitutional trouble be likely to follow.

Dr. DAVIS said he had no experience to guide him, but would refer the Doctor to the literature on the subject. He had however had a case where ptialism was the result of continued use of the

drug, and it was so bad that the patient would wet the pillow at night, rendering it necessary for him to discontinue treatment.

Dr. WEIDMAN suggested that mercury might have been used before by the patient, and the pyalism be due to that.

The Society then adjourned.

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ART. III.—*Abstract of the Proceedings of the Buffalo Medical Association, Tuesday Evening, Dec. 7th, 1875.* Reported by E. N. BRUSH, M. D., Secretary.

The President, Dr. GOULD, in the chair.

Members present: . Drs. Cronyn, Harvey, Howe, O'Brien, Samo, Boysen, Hopkins, Fowler, Lothrop, Abbott, Brecht, Little, Wyc-koff, Barnes, Folwell and McNiel.

By invitation Dr. Shannon, U. S. A., Dr. W. Cronyn, U. S. N., and Dr. Chester.

Dr. HOPKINS read a paper on "Exercise as a Remedial Agent."*

Dr. HOWE exhibited an apparatus for protecting the eye at night from injury by the hands of the patient after operations, etc. The apparatus consisted of an elipsoidal wire mask some three inches in its long diameter, the edges bent to adapt it to the form of the face. It is fastened about the head by means of an elastic band, effectually preventing the patient from touching his eyes in any manner during sleep.

Dr. CRONYN said he did not think that Dr. Hopkins' excellent paper should be passed without notice. Theoretically the subject is of value, and Dr. Hopkins has shown its practical value. There is one objection, exercise as a curative has to be adapted to the condition of health, and hence in some cases it can not be utilized. It is as a prophylactic that it is of most value. This idea of exercise had been used by quacks for a long time in curing chronic cases.

Dr. BARTLETT reported under prevailing diseases some measles and some neuralgia of a peculiar character resembling pleuritis.

Dr. HOPKINS said that he thought that some explanation should

*Owing to lack of space Dr. Hopkins' paper is held over until next month.

be made in regard to the statements of Drs. Rochester and Cronyn that the formation of a membrane could occur without the precedence of inflammatory action, that statements such as had been made by these gentlemen should not be allowed to pass unchallenged, that acquiescence in such opinions would jeopardize the reputation of the Association.

Dr. CRONYN said that the opinion which he was prepared to sustain was that which he advanced several years since in the Association that membranous croup and diphtheria were identical.

Dr. GOULD asked how the mucous membrane could be destroyed by other means than by inflammation.

Dr. CRONYN explained that the mucous membrane could be destroyed without inflammatory action, as an instance in point, typhoid fever in which the mucous membrane of the intestine is destroyed by a slow process of ulceration.

Dr. FOLWELL said that in looking over Virchow and other authorities, he saw that the croupous deposit was formed on the epithelium of the mucous membrane.

Dr. CRONYN said it was a positive fact well understood by pathologists that it was impossible upon a mucous membrane to produce a fibrinous deposit.

Dr. HOPKINS said that it occurred to him that the exudation of croup was in some way the altered plasma of the blood which had become deposited in the vicinity, which had by some physiological, pathological or histological process exuded through the mucous membrane and there become a false membrane.

Dr. CRONYN said that it would be found that when such membrane was formed that the mucous membrane would be absent. He read an extract from the paper of Dr. Semple upon the subject.

Dr. BARTLETT said that it seemed to him of the greatest possible importance that there should be no mistake between these two diseases. He concluded that there seemed to be a marked difference between diphtheria and croup. In a paper which he read upon this subject in this Association, he advised the employment of a blister upon the back of the neck. He thought it of great importance that the distinction should be recognized in order that we may know what treatment to employ.

He asked the opinion of the members present as to the reliability of the vaccine quills furnished by New York and other vaccine stations, and whether the crusts were not better.

Dr. O'BRIEN said that Dr. Foster of New York, would not send out bovine crusts except by urgent request, as he considered them unreliable; that all experienced in the use of bovine virus know this to be the case. He had always used bovine lymph, on the quill, furnished by Dr. Frank P. Foster of New York, and had always found it reliable. When the virus, on the quill, is of sufficiently recent issue, success should follow its use, if it has not been impaired by exposure to heat or moisture. It frequently happens that from inattention to some small, but important point, failure follows its use, to illustrate this he remarked that he had on several occasions successfully vaccinated patients when other physicians had failed to do so, from a part of the same quill used by them.

Quite an animated discussion followed as to the relative merits of quills and crusts humanized and non-humanized virus, during which the Secretary said he could endorse the statement of Dr. O'Brien as to the successful use of quills said to be inert.

On motion, the Society adjourned.

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MISCELLANEOUS.

SUDDEN DEATH AFTER UTERINE INJECTION OF IRON.—The following case was reported by Dr. Cederschiold before the Swedish Medical Society, and it is of interest, as being another instance where injection of fluids into the uterine cavity has been followed by sudden death. The patient was pregnant for the second time. A considerable hemorrhage followed the birth of the child, the uterus did not contract fully, and the fundus could be felt over the pubes. Ergot was of little use, and the hemorrhage recurred from time to time. Eighteen days later a strong solution of the perchloride of iron (1:7) was injected into the uterus. Every precaution was taken; the syringe was freed from air, the pressure on the piston was gradual, etc., but when the injection was half completed the woman suddenly complained of pain in the breast, stretched backward, drew a few short breaths, and was dead.

A post-mortem examination was made the next day. The small intestines were actively congested; a few spoonfuls of thin blackish

fluid were found in the fossa of Douglas, and on the peritoneum in that vicinity there were numerous black spots. The uterus was pretty firmly contracted, was 11 centimetres long, 9 centimetres broad at the fundus, its greatest thickness 4 to 5 centimetres, the uterine walls at the middle 14 millimetres, at the fundus 10 millimetres. The interior of the uterus and vagina was stained dark-brown. The interior of the uterus was uneven and covered with a reddish granulation tissue, with the exception of the sides and fundus, where three superficial oval ulcerated surfaces were found, each 4 to 5 centimeters long. Here the uterine substance was exposed, had a ragged surface, in the centre of which there were leaf-like, somewhat firm structures 1 centimetre high and 3 long. These were intimately united with the underlying tissues, and consisted of organic muscular fibres. At the sides of these formations there were open-mouthed vessels, some of them large enough to admit a fine sound, which then passed into the larger veins of the uterus. These were slit up and followed into the hypogastric and iliac veins, and the vena cava inferior. The blood in these veins was found markedly coagulated, and stained brown. Bubbles of air were also found in them. The same condition was found in the right side of the heart. The lungs and other organs presented nothing abnormal.—*Hygiea*, August, 1875.—*Med. Record*.

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INTERNAL STRANGULATION OF THE INTESTINE BY CICATRICES DUE TO AN HÆMATOCELE.—M. Antoine Magnin, Hospital Interne, reports the following case: A woman was admitted to the hospital suffering from obstinate constipation and abdominal pain, with tenderness on the left iliac fossa. The bowels had not moved for fifteen days. The patient had been delivered of a seven-months' child one year before. Two months after the delivery her menses had returned, but with only scanty discharge, and accompanied with prolonged pains in the abdomen. At the time of admission to the hospital the menses had not appeared for two months. During the succeeding days the pains continued and increased, and were associated with vermicular contractions of the intestines, which were distinctly visible externally. On making a vaginal examination the uterus was found to be fixed in an immovable position, and in the vaginal cul de sac a hard surface was felt, which extended somewhat to the left of the uterus. The symptoms grew more severe, the contractions became more painful, the intestines were tympanitic, and vomiting began. The vomited matters were at first simply alimentary, and afterwards fecal. The patient gradually sank, and died in collapse about one month after her admission to the hospital. At the autopsy signs of a recent peritonitis were found in the pelvic cavity, with a slight serous effusion, but no fecal matter. The large intestine was greatly distended, and filled with feces. On a line with the posterior superior border

of the uterus a circular strangulation was found, which had been produced by cicatricial bands, which united the whole of the posterior portion of the uterus to the rectum and parts adjoining. A short distance above the strangulation a perforation was found, through which, on using some little force, a portion of the contents of the bowel could be forced into the peritoneal cavity.—*Lyon Medical*, Sept. 19, 1875.—*Med. Record*.

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Epidemic Puerperal Fever.

In the course of some remarks on the above topic Dr. Fordyce Barker (*Medical Record*, Oct. 30, 1875,) said: "I can not resist the conviction that the study of the genesis of puerperal fever is the study of a distinct essential disease which attacks puerperal women, and only puerperal women.

"The great practical end in view in the study of the genesis of puerperal fever is, to ascertain what causes of the disease are preventable. A very great advance has been made within a few years in our knowledge of the various agencies which contribute to septic poisoning, and still more striking has been the addition to our resources in the use of antiseptic remedies. Every intelligent obstetrician appreciates, at the present day, as they did not in former periods, the great importance of averting all the predisposing causes of the disease in the patient herself, by an efficient treatment of anæmia and albuminuria in the last periods of pregnancy, a condition which so tends to blood deterioration, and which so favours the absorption of septic poison—by securing to the patient perfect ventilation and good air during the labour and the puerperal period, avoiding the old error of keeping the room too hot, with ever crevice closed that will admit air; by preventing delay in labour, in the early resort to the use of the forceps or other resources of our art, when necessary; by effecting the early removal of the placenta by compressing the uterus, thus securing the efficient and permanent contraction of this organ, and thus preventing the retention and decomposition of clots, and the torture and exhaustion of after-pains; by removing immediately after labour all soiled clothes and bedding, and carefully watching that none are ever after permitted to contaminate the patient; by antiseptic washes and injections, to prevent autogenetic poisoning; by good nutrition; and lastly, by guarding the patient against the dangers of infection or contagion through the medium of the nurse or the obstetrician. This is a very rapid and by no means complete exposition of the resources we have at command for averting danger from puerperal fever.

"But there still remain, as great determining causes of this fearful disease, nosocomial malaria and epidemy. How to overcome

and to exterminate nosocomial malaria is the great problem which I confidently hope will be solved by the progress of science at no remote period. The devastation which results from this cause, in obstetrical and surgical hospitals, has led some to the extreme folly of questioning the usefulness of hospitals, and others to urge as a radical necessity the extravagantly expensive procedure of pulling down all the old hospitals, and of reconstructing them of such material that this process can be repeated ever few years. But, in the first place, this is not demonstrated to be a radical preventative of the septic diseases which result from nosocomial malaria, for there are well-authenticated reports of puerperal fever in new hospitals for maternity, and of pyæmia and of septicæmia in new surgical hospitals among the first patients received into them. In the second place, I cannot believe that chemical science is so powerless as to fail in finding some means of wholly exterminating this miasm. The experiment has been already successfully tried in this city. I was struck by the remark in the paper of Dr. Lusk, that after the lying-in wards at Bellevue were given up on account of puerperal fever, they were occupied as surgical wards in the service of Dr. James R. Wood, and that not a single case of septic disease has occurred in them. I am informed by Dr. Dennis, house-surgeon at the present time, that there have been eighteen amputations in patients in these wards, and not a single death. But in some of the surgical wards the fatality from septic disease was really frightful, as reported by the surgeons in attendance; and Prof. Doremus was employed by the Commissioners to disinfect them. I will give his method of procedure, as I wrote it down from his verbal statement to me.

"The purification of the surgical wards in Bellevue Hospital was accomplished during the spring and summer of 1875, by the employment of large volumes of *chlorine* gas.

"This powerful disinfectant was resorted to because all the poisonous emanations from the human system are decomposed by it, and thus rendered inert (carbonic acid gas excepted); also because of its diffusive power. Strips of paper were pasted over the crevices around the windows and doors, before generating the chlorine.

"Two sheets of lead about eight feet long and four feet wide were turned up at their edges and placed on the floor of the ward to be treated.

"In these leaden receptacles several hundred pounds of black oxide of manganese and common salt were placed, to which water was added until the mass, when thoroughly stirred with wooden shovels, had the consistency of a thick mud.

"Bowls, basins, pitchers of sulphuric acid were placed around the leaden vessels in readiness to be applied to the black mixture. To eliminate all the chlorine, the acid should equal the weight of the salt and manganese combined. Water was then poured over the floor to dampen the wood, and the ward was filled with steam

until the moisture condensed on the ceiling and walls. The air of the room was so saturated with partly condensed vapour that we had to grope our way towards the vessels containing the sulphuric acid.

"The several assistants then held said vessels over the mixture of manganese and salt, and at a signal all poured out the acid at the same time; then hastened to the second leaden trough, applied the acid and rushed out of the door to escape inhaling the chlorine gas which was liberated in immense volumes. Since the amount of poisonous gas was so great that it would have proved fatal to any one entering the apartment, the doors were securely fastened to guard against such an accident.

"After the lapse of twenty-four hours, the vessels were again filled with sulphuric acid and placed around the leaden pans. The mixture was then rapidly stirred, and the second application of acid made as in the first instance.

"For these two treatments about a carboy of sulphuric acid (160 lbs.) was employed.

"After a second twenty-four hours' exposure of the ward to this gas, the windows were thrown open, the residuum of sulphate of manganese and sulphate of soda was removed, with the leaden and other vessels, and the walls and floor scrubbed and dried.

"The chlorine was generated by this method, rather than by the addition of hydrochloric acid and manganese, not only because it is cheaper, but because the heat generated by mixing sulphuric acid and water rarefies the gas and facilitates its dissemination through the room and its passage into the porous walls.

"Chlorine is comparatively inefficient unless moisture is present, hence steam was employed as described.

"After one ward had been thus disinfected and ventilated, the same large leaden vessels were taken to adjoining ward and the process repeated.

"Especial stress is laid on the importance of generating enormous volumes of the chlorine gas, that it may thoroughly permeate the walls. As its odour is very pronounced, persons are liable to err in regard to the quantity, and they merely produce a bad smell and signally fail to destroy the virus with which old or even new walls are at times impregnated.

"The *water-closets* were perified by the use of *ozone*.

"This active form of oxygen was generated by mixing equal weights of maganate of soda and sulphate of magnesia in a dry state, and sprinkling this mixture in and around the basins at night, so that it might remain for a longer period than if applied in the daytime.

"When brought in contact with water, *permanganate* of soda is produced, which decomposes in contact with the impurities of the sink, and involves ozone, by which agent the disgusting and poisonous substances are decomposed, deodorized and rendered harmless.

"This treatment was repeated to secure purification.

"One hundred pounds of manganate of soda, and the same weight of sulphate of magnesia, were employed. For generating the chlorine in the different wards over five thousand pounds of the black oxide of manganese, twenty-five sacks of salt and the equivalent of sulphuric acid were used.

"Since this disinfection of the hospital, I am informed by members of the House Staff that there has been but one case of pyæmia or other septic disease in the hospital, and this was a very doubtful one. By the methods adopted by Professor Doremus, or some other method improved by the progress of chemical science, who can doubt that in the future we shall find hospitals, as securely freed from nosocomial malaria as we are now protected from small-pox by vaccination."—*Monthly Abstract*.

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A Case of Inversion of the Uterus, with Operation by White's Method.*

REPORTED BY E. C. COXE, M. D., BUFFALO, N. Y.

Mrs. C., aged 25 years, is a native of Allegany county. She married when 18 years old, and had two confinements unmarked by any special incidents. On the 10th of June, 1875, she was brought to bed with her third child, and was attended by a practitioner who for some time had discontinued professional business.

Dr. W. S. Cottrell, the physician now in charge, gives the following history of the case up to the date of the operation: "I was called to see Mrs. C. shortly after her delivery, the messenger stating that Dr. H. did not think that she would live five minutes. I immediately went to the house, and found the patient looking very badly; pale, in considerable pain; pulse 180, feeble in character. I asked the doctor if there had been flooding; he replied there had not, and said that he attributed the pallor and prostration to the morphine which he had administered, gr. ij., within twenty minutes. Shortly afterwards she vomited the morphine, and expressed herself as feeling some better. The doctor in charge then stated to me that the child was born with the cord around its neck, and that the placenta and uterus came down at the same time with the child, that he detached the placenta and returned the uterus. The women present say, however, that the child was born naturally, and that some time elapsed before the doctor 'took the after-birth,' and at the time there was some organ visible which they had never seen before in confinements.

* This is the twelfth case of Dr. White's series of successful restorations of the inverted uterus.—*Ed. Buffalo M. & S. J.*

"The case was afterwards placed in my hands, and on visiting her four weeks after her delivery I found her feeble in health, taking but little food, and that liquid in character. Nevertheless, there was a large secretion of milk, on which the child thrived.

"Dr. Shaw, of Erie county, being in the neighborhood, I determined to call him in consultation. Upon examination, a tumor was found lying in the vagina, which Dr. Shaw pronounced a uterine fibroid.

"This diagnosis was not satisfactory to me, so I sent for Dr. Crandall, of Andover, N. Y., to come in consultation, telling him to bring his instruments with him in case we should decide it was fibroid. On examining the patient, Dr. Crandall gave as his opinion that the tumor was an inverted uterus.

"At this date, August 24th, Mrs. C. being fearfully reduced, and subject to very frequent hæmorrhage, we decided that an operation for her relief should be attempted without delay."

Dr. Cottrell, at the request of the patient's husband, on the 9th of September wrote to Dr. White, asking him to operate. The doctor in reply named Sept. 22d as a convenient date, adding detailed directions in regard to preparing her for operation, *i. e.*, quinine and iron tonic, generous diet, perfect quiet, etc., laying *particular stress* upon the necessity of having the rectum thoroughly empty on the appointed day.

On Sept. 22d Dr. White arrived, and proceeded to make his preliminary examination, the following gentlemen being present and assisting: Drs. Cottrell, of Whitesville; Crandall, of Andover; Cox, of Buffalo, and Mr. Langworthy, a student.

The patient being fully under the influence of ether, Dr. White made an attempt to examine by means of the sound in the bladder and the finger in the rectum; but the condition of the latter viscus, which, in spite of reiterated instruction, had been allowed to become loaded with hardened feces, made this procedure impossible.

Upon introducing his finger into the vagina, the doctor was puzzled to find an object, which, in shape and consistence, differed greatly from the organ which he was in search of. After careful manipulation, he was enabled to draw forth a ball of cotton cloth saturated with horribly offensive putrid blood and discharge. Quite a quantity of black tarry fluid followed the withdrawal of the wad, filling the room with a stench truly infernal.

Dr. Cottrell explained that two weeks previous, Mrs. C. having a severe attack of flooding, Dr. Crandall had found it necessary to tampon the vagina, using for the purpose four pieces of cotton cloth. He had left directions for him, Dr. Cottrell, to remove them on the following day. This, as he thought, he had done, but events proved that a portion of the tampon had been left *in situ* for a *fortnight*; the uterus, by its agency, during the period being freely bathed in a highly septic fluid.

After thoroughly syringing the vagina, the doctor was enabled to make a perfectly satisfactory diagnosis by conjoined manipulation. By pushing up the tumor, the inverted os could be plainly felt through the walls of the abdomen, which were relaxed and thin. The uterus was not large, showing that the process of involution had not materially been interfered with.

Introducing the right hand, armed with a large rectal bougie, into the vagina, while making counter-pressure with the left over the abdomen, partly by pressure, partly by manipulation, the walls of the uterus soon began to yield, and at the end of six minutes the doctor announced that the reduction was effected.

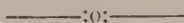
In this operation it was found unnecessary to use the "egg-beater" repositor. By comparing dates, we find that the uterus had been inverted for three months and twelve days.

The patient rallied nicely from the ether, the pulse was good, appearance quite cheerful. Feeling a good deal of uterine tenesmus, morphine was administered and followed by relief.

Particular directions were then given in regard to antiseptic injections. Carbolic water to be used freely, quinine to be given in full doses, and all pain subdued by opiates.

Subsequent to the operation, symptoms of septicæmia showed themselves. These, however, yielded promptly to appropriate treatment, and this danger averted, the patient began to make rapid progress towards a good recovery. On the fifteenth day after the operation, the menstrual flow appeared, continuing for two days. It was accompanied by the usual headache and slight abdominal pain, but no more than she was accustomed to experience at her "monthlies" before her pregnancy.

Eighteen days from date of operation the patient was able to sit up in a chair, ate with good appetite, and appeared so well that her attending physician discontinued his visits.—*Medical Record*.



POISONING BY CHLORAL.—An interesting case of poisoning by Chloral hydrate is reported in the *Centralblatt f. d. Med. Wissensch.* of April 3. A man who had taken twenty-four grammes (about 370 grains) of chloral hydrate, was found half an hour after in deep sleep, no more dangerous manifestations of its effects having yet developed themselves. About half an hour later, however, he began to suffer from interrupted respiration, the heart remaining normally active. Subsequently the heart's impulse became dangerously feeble, so that the pulse could only be felt in the carotid, while the face became deathly pale. The pupils were greatly contracted, and the temperature sank to 91.94 Fah. Artificial respiration by means of passive motions and faradization, being followed by no improvement, 0.003 gramme of strychnia was injected subcutaneously. Muscular spasm set in immediately, rapidly followed by trismus, the heart's impulse became again per-

ceptible, the pupils enlarged, and the temperature rose to 91.94 Fah. Dangerous symptoms manifesting themselves again shortly after, a second injection of 0.002 grammes of strychnia was administered, the effects of which displayed themselves as before; the heart's action increased in power, and the temperature rose to the normal; respiration had, however, to be excited for eight hours longer by means of the induced current. Thirty-two hours after the poisoning he awoke fresh and free from all effects, having, on several occasions, been easily awakened from his sleep. The trismus and tetanic contraction of the muscles of the upper extremities persisted for fourteen hours after the second injection of strychnia. No gastritis followed this enormous dose of chloral, the probable reason being that the stomach was full at the time it was taken.—*New Remedies.*

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Editorial.

INTERNATIONAL MEDICAL CONGRESS.

The Medical Societies of Philadelphia, animated by a just spirit of patriotism, and an earnest desire to unite with their fellow-citizens in celebrating the Centennial Birthday of American Independence, have taken the initiatory steps for the formation of an INTERNATIONAL MEDICAL CONGRESS, by the appointment of delegates from their respective bodies, who are empowered to organize and perfect a scheme for the above purpose. In accordance with the authority thus given, the delegation has organized

THE CENTENNIAL MEDICAL COMMISSION, WITH THE FOLLOWING OFFICERS:

President, SAMUEL D. GROSS, M. D., LL. D., D. C. L. Oxon.

Vice-Presidents, W. S. W. RUSCHENBERGER, M. D., U. S. N., ALFRED STILLE, M. D.

Recording Secretary, WILLIAM B. ATKINSON, M. D.

American Corresponding Secretaries, DANIEL G. BRINTON, M. D., WILLIAM GOODELL, M. D.

Foreign Corresponding Secretaries, RICHARD J. DUNGLISON, M. D., R. M. BERTOLET, M. D.

Treasurer, CASPAR WISTER, M. D.

Arrangements have been made for the holding of the CONGRESS in the city of Philadelphia, to begin on the 4th and terminate on the 9th of September, 1876. The Commission propose the following general plan for the organization and business of the Congress:

I. The Congress shall consist of delegates, American and foreign, the former representing the American Medical Association and the State and Territorial Medical Societies of the Union; the latter the principal medical societies of other countries.

II. The officers shall consist of a President, ten Vice-Presidents, four Secretaries, a Treasurer, and a Committee on Publication, to be elected by the Congress at its first session, on the report of a Committee of Nomination.

III. The morning sessions of the Congress shall be devoted to general business and the reading of discourses; the afternoons to the meetings of the Sections, of which there shall be nine, viz.:

1. Medicine, including Pathology, Pathological Anatomy and Therapeutics.
2. Biology, including Anatomy, Histology, Physiology and Microscopy.
3. Surgery.
4. Dermaology and Syphilology.
5. Obstetrics and Diseases of Women and Children.
6. Chemistry, Toxicology and Medical Jurisprudence.
7. Sanitary Science, including Hygiene and Medical Statistics.
8. Ophthalmology and Otology.
9. Mental Diseases.

IV. The language of the Congress shall be the English, but not to the exclusion of any other language in which members may be able to express themselves more fluently.

Gentlemen intending to make communications upon scientific subjects will please notify the Commission at the earliest practical date, in order that places may be assigned them on the programme.

In order to impart to the Congress a thoroughly international character, invitations to send delegates will be extended to all the prominent medical societies in Europe, Mexico, the British Dominions, Central and South America, the Sandwich Islands, the East and West Indies, Australia, China and Japan. Invitations will also be tendered to medical gentlemen of high scientific position; and distinguished visitors may be admitted to membership by a vote of the Congress.

Among the advantages arising from such a convocation as this, not the least important will be the opportunity afforded its members for the interchange of friendly greetings, the formation of new acquaintances, and the renewal and cementing of old friendships.

The Centennial Medical Commission tender in advance to their brethren in all parts of the world a cordial welcome, and a generous hospitality during their sojourn in the "Centennial City."

The Congress will be formally opened at noon, on Monday, the fourth day of September, 1876.

The registration book will be open daily from Thursday, Aug. 31, from 12 to 3 P. M., in the Hall of the College of Physicians, N. E. corner 13th and Locust streets. Credential must in every case be presented.

Gentlemen attending the Congress can have their correspondence directed to the care of the College of Physicians of Philadelphia, N. E. cor. of Locust and Thirteenth Sts., Philadelphia, Pa.

There is every reason to believe that there will be ample hotel accommodation for all strangers visiting Philadelphia in 1876. Further information may be obtained by addressing the Corresponding Secretaries.

All communications must be addressed to the appropriate Secretaries.

WILLIAM B. ATKINSON, 1400 Pine street, Philadelphia,

Recording Secretary.

DANIEL G. BRINTON, 115 South Seventh,

WILLIAM GOODELL, 20th and Hamilton Sts.,

American Corresponding Secretaries.

RICHARD J. DUNGLISON, 814 N. 16th street,

R. M. BERTOLET, 113 S. Broad street,

Foreign Corresponding Secretaries.

Philadelphia, October, 1875.

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The Alumni Association of the Medical Department of the University of Buffalo.

The Executive Committee of the Association of the Alumni and officers of the Medical Department of the University of Buffalo have issued the following circular to which we take great pleasure in calling the attention of those of our readers who are alumni of the Buffalo Medical College:

Association of the Alumni and Officers of the Medical Department of the University of Buffalo.

OFFICE OF THE EXECUTIVE COMMITTEE, }
Buffalo, N. Y., Jan. 20, 1876. }

DEAR DOCTOR:

The Second Annual Meeting of this Association will be held on Wednesday, February 23d, 1876, at ten o'clock A. M., in the College building, corner of Main and Virginia streets. In the evening at seven and a half o'clock the commencement exercises of the College will be held at St. James Hall. The address to the graduating class will be delivered by M. B. Anderson, LL. D., President of the Rochester University, following which the annual address to the Alumni will be delivered by Sanford B. Hunt, M. D., of Newark, N. J., formerly Professor of Anatomy in the Medical department of the University of Buffalo. At the conclusion of the exercises at the Hall a supper will be served at the Tiff House.

The order of business at the meeting at the College will embrace the following: An address by the President of the Association, Dr. W. W. Jones, (49) of Toledo, O., Essay by Dr. C. H. Richmond, (60) of Livonia Station, N. Y., Subject, Questions Relating to Sanitary Science, A Paper by Dr. S. H. Benton, (70) of Oil City, Pa., on Hygiene and Sanitary Reform, and a poem by Dr. F. Bradnaek, (71) of New York City.

The pronounced success of the inaugural meeting of this Association in February last, and the well known ability of the gentlemen who are to address the Association and present papers for discussion at the coming meeting, warrant the committee in assuring you that your attendance, which is strongly urged, will be both pleasant and profitable.

The committee desires to state that the character of the papers which will be presented will confine the discussion to a subject which is daily assuming more importance, viz.: Sanitary Science, and they therefore suggest that you come prepared to discuss that topic. In their preparations for the supper, etc., it is important that the committee should know how many will be present, you will therefore confer a favor by communicating with us at an early day in reference to your attendance.

Very sincerely yours,

W. W. POTTER, M. D., Chairman,
E. N. BRUSH, M. D., Secretary,
A. H. BRIGGS, M. D.,
W. W. JONES, M. D., President and
member *ex officio*,
M. G. POTTER, M. D., Dean of College,
and member *ex officio*.

Please address all communications to Dr. E. N. Brush, Secretary of the Committee, No. 8, S. Division St., Buffalo, N. Y.

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Hospital Vacancy.

We are requested to state that the position of the Resident Physician to the Buffalo General Hospital will be vacant on the first of March, 1876. The position will be filled by means of a competitive examination, and all applicants who intend entering the examination should hand their names and credentials to Dr. Conrad Diehl, Secretary of the Hospital Staff, on or before February 22d, who will notify them of the time and place of examination. By a recent regulation the term of Resident Physician is limited to one year.

The *Leavenworth Medical Herald* and the *Kansas City Medical Journal* have suspended.—The *American Psychological Journal* is now edited by Dr. Allen McLane Hamilton, assisted by an able corps of associate editors. The department relating to Medico-Legal subjects has been transferred to the *Sanitarian*. The *Chicago Journal of Nervous and Mental Diseases* will hereafter drop the word *Chicago* from its title, and will be published simultaneously in Chicago and New York. Messrs. G. P. Putnam's Sons have assumed its publication in New York. The Editorial management remains unchanged, but the co-operation of Dr. Wm. A. Hammond, of New York, Dr. S. Weir Mitchell, of Philadelphia, and Dr. E. H. Clark, of Boston, has been secured in conducting the Journal.—Owing to a press of other matter the department of *Medical Notes* has been crowded out for the past few months.

Books Reviewed.

Lecture on Diseases of the Nervous System. By JEROME K. BAUDNY, M. D., Professor of Psychological Medicine, etc., in the Missouri Medical College. Reported by V. BLART, M. D., Revised and Edited by the Author. Philadelphia: J. B. Lippincott & Co., 1876. Buffalo: Martin Taylor.

This work does not pretend to present to the profession any essentially new or original ideas, it is, however, an excellent condensation of the more generally accepted ideas upon the Diseases of the Nervous System, and is well adapted to the wants of the student or general practitioner. The lectures are forty in number, and are arranged in a systematic order.

The various forms of cerebral hyperæmia and anæmia are first considered. The inflammations of the meninges are next considered; following are six lectures devoted to the subject of insanity. Apoplexy and Cerebral Hemorrhage are treated in two lectures. In the portion devoted to treatment of the subject of blood letting is discussed and condemned.

In the consideration of the medico-legal relations of epilepsy the author goes very fully into the subject, and has made this a very interesting and instructive portion of his work. The concluding chapters of the work are upon diphtheritic paralysis, various infantile paralyses, aphasia, syphilitic nervous affections, neuralgia and glosso-labio-laryngeal paralysis.

The lecture upon syphilitic nervous affections is, without going too fully into detail, a very full exposition of what may be suspected in syphilitic patients subject to nervous disorders of any kind. The lecturer wisely cautions his hearers not to place every ill-defined disorder to the credit of syphilis, but nevertheless tells them what they are to fear in making a diagnosis, and what to do when the diagnosis is made.

Clinical Lectures and Essays. By SIR JAMES PAGET, Bart. Edited by HOWARD MARSH, F. R. C. S. New York: D. Appleton & Co., 1875. Buffalo: Herger and Ulbrich.

Most of these lectures and essays have appeared in Medical Journals or Hospital Reports, but in the present form they are more readily obtained by the general professional reader, and all who have read and admired these essays as they have appeared elsewhere will most heartily thank the author for publishing them in the present form.

The reader is at once pleased with the earnestness and pains-taking of the lecturer. He allows no detail, no matter how minute, to escape his attention which may in the end influence the termination of the case. No circum-

stance is considered too trivial to engage his attention if thereby he may prevent his hearers from falling into error.

The author says: "I do not suppose that the book contains much, if anything, which is not known to those who are in large surgical practice, or familiar with surgical literature; but it is not intended for these. Its chief purpose will be attained if it be useful to the students, and to those who have too few opportunities of studying surgery in either large practice or books."

The subjects considered are the following: The various risks of operations, the calamities of surgery, stammering with other organs than that of speech, cases that bone-setters cure, strangulated hernia, chronic pyæmia, nervous mimicry, treatment of carbuncle, sexual hypochondriasis, gouty phlebitis residual abscess, dissection-poisons, quiet necrosis, senile scrofula, scarlet fever after operations, and notes for the study of some constitutional diseases.

These subjects are those which every physician encounters in his every day practice, and the reader may enquire if there is anything in these subjects which has not been said over and over by authors and teachers. The author admits that there may be nothing new in the work, but he has treated each subject in such a clear logical manner and withal in such honesty of purpose that the reader cannot help gathering new and valuable ideas on each subject.

When he has a doubt as to diagnosis or prognosis he freely admits it, thus showing to the young professional man that he is not the only one who sometimes doubts; when his cases terminate differently from what had been anticipated, he carefully scrutinizes each step in their progress, and does not hesitate to expose his own errors for the warning of his reader.

We wish that we had the time and space to go fully into the many valuable and excellent features of the work, but to do that would be to occupy our entire Journal, we can only say in conclusion that the work is as much adapted to those engaged in large surgical practice as to students and those unfamiliar with surgical practice or literature.

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Books and Pamphlets Received.

A System of Midwifery, Including the Diseases of Pregnancy and the Puerperal State. By William Leishman, M. D., etc. Second American from the Second Revised English Edition. With Additions by John S. Parry, M. D. Philadelphia: Henry C. Lea, 1875. Buffalo: T. Butler & Son.

The Archives of Dermatology. A Quarterly Journal of Skin and Venereal Diseases. Edited by L. Duncan Bulkley, A. M., M. D. Volume First. New York: G. P. Putnam's Sons.

B U F F A L O

Medical and Surgical Journal.

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FEBRUARY, 1876.

No. 7.

Original Communications.

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ART. I.—*Warm and Hot Water in Surgery. A Short Historical Sketch, with the Present Most Approved Methods of Application. With Cases.* By FREDERICK E. HYDE, M. D., New York.
[CONTINUED.]

CASE XVI.—*Large Bursa of Wrist—Incision and Submersion—Results negative.*—A blacksmith presented himself at my office with a large bursa on the back of his hand and forearm—probably seven inches in length by three in breadth, and by which he was completely disabled.

In February, 1874, I opened the bursa at two points, (at Bellevue Hospital,) and had the arm submerged at once in warm water. The openings did not prove to be sufficiently free to allow of easy ingress and egress of the water, and the consequence was that when suppuration took place the matter made an exit at two other points; but at no time was the inflammatory reaction violent.

March 25th.—The wounds are nearly closed, and it is apparent that a cure may be promised. In order to compare the results in this case with other similar cases, I will mention that about the same time a similar bursa of the arm was opened by one of my colleagues at Bellevue, and treated by injection of tinc. of iodine.

A very smart inflammatory reaction resulted, with a suppuration, and several openings formed for the discharge of pus. * *

A few days since a patient was brought to me by Dr. Cox, of Harlem, with a similar bursa, which had opened spontaneously at various points, and was accompanied with purulent infiltrations between the metatarsal bones.

REMARKS.—On the whole, I am satisfied that of these three examples the case treated by submersion did the best, yet the value of this plan can only be demonstrated when the water has perfectly free ingress and egress. In a like case I would hereafter lay open the whole length of the bursa.

I may add here the following case of compound fracture of the first phalanx of the little finger, from my own practice.

R. S., a laborer, while carrying a stove, fell, a corner falling upon the little finger of the right hand, causing a compound, comminuted fracture at the middle of the phalanx, and a superficial wound of ring finger, the two wounds facing each other at the interdigital commissure.

Immediately after the accident he went to the nearest physician who placed it upon a straight wooden splint extending from the end of the finger to the wrist. This caused such excessive pain that he was unable to sleep the following night. Coming to me the day following, as I had previously attended his family, I removed the splint, found the the finger about half severed from the hand, with much contusion of margin of the wound. Directed the patient to put the hand in water as hot as he could comfortably bear it, and to keep it at such a temperature, using a deep bowl, and to cover the bowl with a cloth and oiled silk, at night to apply the warm, moist cloths and oiled silk. The submersion was continued about eight days.

The next day I found that the patient had rested well during the night.

Fourth day finger much swollen, about double normal size. Perceiving some odor from the wound, cut open the loosened, white and sodden epidermis, and found that the contused distal margin of the wound had sloughed and was partly separable, applied acetate of aluminum in dry powder to the wound, which removed

the foul odor, leaving no odor whatever, as carbolic acid does. This was suggested by Dr. A. Rose. There was a decided line of demarcation between the healthy tissue and the gangrenous mass. The whole length of finger, from which the loosened epidermis had been removed, was of a bright pink, a new epidermis having already formed. The patient had experienced for the last forty-eight hours considerable pain from the swelling of the epidermis of the portion of the hand submerged, this was relieved by the addition of salt to the water. In a few days bright granulations had completely filled up the wound and new skin was advancing from the margins. Subsequently, noticing a delay in the healing process, I found an opening through the granulations leading to necrosed bone; being firmly wedged, I waited a few days for its spontaneous separation, but was finally obliged to remove it forcibly, taking out three pieces equal to the semi-circumference of the bone. Fibrous union had already taken place between the ends of the healthy bone. The wound now healed rapidly under fomentations. At no time did inflammation extend beyond the wound, or was pain felt in moving the tendons.

The œdema being very great I used no splint, as it was the little finger that was injured, and as the wound was on the side of, and close to, the interdigital commissure, I relied upon the contraction of the wound in cicatrizing to draw the finger into line. This it has done, and at the present writing, ten weeks after the accident, the finger has returned to its normal size, with wound completely healed. There is yet some passive ankylosis which would have been overcome before this, had not the patient ceased to manipulate it, having scraped the skin from the back of his finger in moving some furniture.

In a summary of conclusions drawn from these cases, Dr. Hamilton says: "No treatment hitherto adopted, under our observation, has been attended with equally favorable results. Under this plan the area of acute inflammation is exceedingly limited; erysipelatous inflammation has been almost uniformly arrested or restrained, when it has actually commenced, and it has never originated after submersion; gangrene has in no instance extended beyond the parts originally injured, and when progressing it has in most cases

been speedily arrested, (in gangrene hot water, or water at a temperature of 100° to 110° Fahrenheit, is to be preferred). Septicaemia and pyaemia have not ensued in any case in which submersion has been practiced from the first day of the accident. Purulent infiltrations and consecutive abscesses have been infrequent, and always limited to the neighborhood of the parts injured, and small extent. Traumatic fever, usually present after grave accidents, when other plans of treatment have been pursued, as early as the third or fourth day, has seldom been present when this plan has been adopted, and in no case has the fever been intense or alarming."

"The phenomena usually observed in cases of recent lacerated or incised wounds, when submerged, are a sense of comfort, yet not absolute relief from pain; on the second and third day the parts adjacent are swollen, but not much reddened; the integument generally assumes a white and sodden appearance, and with only slight tenderness. On the fifth, sixth, or seventh day the swelling is greater than usually accompanies other plans of treatment; and, with the inexperienced, is likely to excite alarm, but it is found not to be attended with increased tenderness, and it pits upon pressure, showing that it is a condition of oedema only. At this time the granulations are generally covered with lymph or some exudate of a whitish color, and which might easily be mistaken for diphtheritic deposit. At the end of fourteen days, or thereabouts (the period at which, in most cases, we substitute fomentations for submersion), the limb is still oedematous, the granulations are abundant, sometimes presenting a fresh, red appearance, and at others covered with the white exudate."

EFFECTS ENSUING FROM THE SUBSTITUTION OF FOMENTATION FOR SUBMERSION.

"Pursuing the clinical history of these cases, we find that after fomentations are commenced, the oedema gradually lessens, but its final disappearance is delayed sometimes to a period beyond the complete cicatrization, so that the cicatrix, not unfrequently, is considerably depressed below the level of the sound parts; and we have seen this condition of the parts continue for many months.

We observe, also, that the granulations are red and abundant, and that cicatrization progresses as rapidly as under any other plan of treatment; indeed, we are inclined to think that it progresses more rapidly than we are accustomed to see where other plans, considered appropriate, have been adopted. We speak especially of the vigorous appearance of the granulations, and of the cicatrization, because our opinion was, before observing these cases, that warm water fomentations and warm baths would render granulations weak, pale, and sodden, and retard cicatrization. If such effects have resulted, they must have been presented as rare exceptions, since we have not observed them."

AFTER ERYSIPELAS HAS ACTUALLY COMMENCED.

"We had very few opportunities of testing warm water submersion *after erysipelas has actually invaded a limb*, since, at St. Francis' Hospital, where most of these observations have been made, erysipelas is generally *prevented*; but in two or three examples imperfectly managed, at Bellevue Hospital, the results have at least furnished no testimony which would deter us from further trial. In explanation of this latter statement, relating to Bellevue Hospital, it is necessary to say that, with one exception, the bathing-tubs employed were improvised and were imperfect, the amount of attendance during the night is too limited to insure faithful attention to the temperature of the water, the heat of the wards is greatly lowered, and none of the nurses have experience in the management of the baths."

VALUE OF HOT WATER IN TRAUMATIC GANGRENE.

"The power of hot water baths, or water at or above the normal temperature of the blood, to arrest traumatic gangrene is remarkable, and the writer entertains a hope that its efficiency may not be limited to *traumatic gangrene* alone, yet this remains to be proven."

In connection with the subject of erysipelas above referred to I have obtained the following five cases treated with warm water, from an article upon this subject, by Dr. A. H. Goeler, of New York, publishes in the *American Medical Weekly*, of Louisville, Ky., May 15, 1875.

Dr. Goeler was upon the staff at Ninety-ninth Street Reception Hospital at the time that Dr. Hamilton was surgeon-in-chief. After stating the advantages of the warm water treatment, over the remedies in general use for combatting traumatic erysipelas, such as cold and astringent applications, and painting the parts with tincture of iodine; he gives the cases, which were treated by himself, as follows:

CASE I.—William Dunham, aged thirteen, native of the United States, was admitted February 29, 1874, with a compound comminuted fracture of lower end of the humerus and laceration of the perineum. On April 11th, erysipelas began to be developed in the arm as the result to irritation caused by the removal of a fragment of bone. The arm was painted with tincture of iodine and then enveloped with warm cloths. This treatment was continued until the 15th, the erysipelas continuing to spread all the time, when by advice of Professor Hamilton, who was surgeon-in-chief, the tincture of iodine was discontinued, and the arm submerged in warm water. It began to show improvement from this time, and on the 19th, all inflammation had disappeared.

CASE II.—Patrick Guilfoyle, aged twenty-one, single, native of Ireland, laborer, was admitted July 14th, 1874, with a very severely lacerated and contused foot, which was amputated the same day, Syme's amputation being performed. Four days after (18th), the stump took on cellular erysipelas. It was treated with *lotio plumbi et opii* on sheet lint, but this seemed to aggravate the inflammation, and it rapidly extended up to the knee. Then poultices of flaxseed meal were used with slight benefit, but they were unwieldy and unclean, and could not be kept warm. This treatment was followed until the 31st, attended with *lotio plumbi et opii*, and the poultices, without any apparent benefit. Then the treatment was changed, the leg was enveloped with lint wet with warm water, and the whole covered with oiled silk, and in the course of twenty-four hours there was marked improvement. This was continued until August 6th, the dressings being applied twice daily, when the erysipelas had disappeared by resolution.

CASE III.—John Dally, aged twenty-three, native of Ireland,

laborer, came to the dispensary of this hospital July 21, 1874, with a severe laceration between the thumb and index finger of the left hand. One suture was applied in the middle of the wound and this strengthened by adhesive strips. Two days after (the 23d), he returned for redressing when it was found that the whole of the dorsum of the hand and forearm, for some distance up, was the seat of erysipelas. The whole hand and arm were wrapped in lint saturated with warm water, and then enveloped with oiled silk. In two days he returned again, the erysipelas was disappearing, and the wound suppurating. Same dressing was reapplied, and after the lapse of two days the inflammation had subsided.

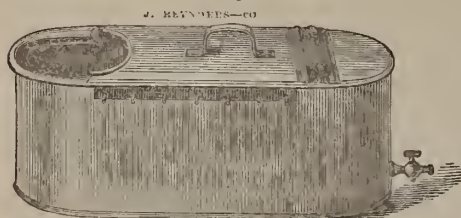
CASE IV.—Carl Tedesco, aged twenty-two, single, native of Germany, laborer, admitted June 10, 1874. This patient states that about eleven years ago he received a bite from a dog on the left forearm, which was cauterized on the same day, and soon the wound healed nicely. About June 10th, the patient's health being somewhat impoverished, the old wound suddenly became painful and inflamed. A hypodermic injection of morphine was given in the hand of the same side. The arm became more inflamed and soon erysipelas was well marked. The hand and forearm were submerged in warm water for an hour or two, but this being inconvenient for the patient, it was taken out and wrapped in wet lint and covered with oiled silk. After the treatment had been followed for three days the erysipelas had abated.

CASE V.—Thomas Gerity, aged twenty-six, single, native of the United States, laborer, came to the dispensary on December 23, 1874, with cellular erysipelas of the forearm. The warm water dressing was applied, and in two days he returned, with some improvement and said it gave him great relief, for the pain with itching was gone. The same dressing was reapplied, and when he returned in two days all signs of erysipelas had disappeared.

METHOD OF USING THE WARM WATER BATHS.

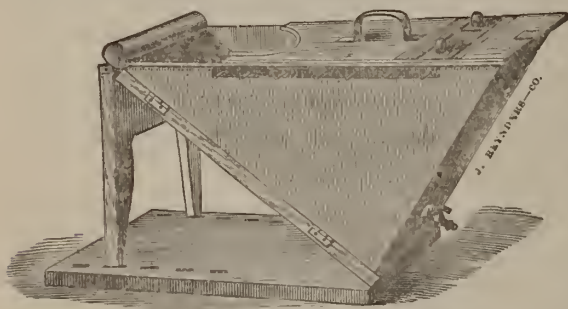
The baths for submersion used at the St. Francis' Hospital and recommended by Dr. Hamilton, were imported by the Franciscan Sisters, who had employed them under the direction of German sur-

geons during the wars between Prussia and Denmark, Prussia and Austria, and Germany and France.



Their dimensions are as follows: For the arm or hand an oblong zinc bath, 23 inches long by 8 inches wide, and 8 inches deep, with edge rolled

where the arm is to enter. A movable cover extends over about two-thirds of the vessel, the remaining space being left for the arm to enter. A stop-cock is inserted at the base of the bath for the purpose of drawing off the water previous to renewal. Along the upper and outer margins of the bath are arranged small wire pins, upon which small pieces of cloth may be fastened for the purpose of sustaining the limb. Care must be taken not to allow the arm to rest against the edge of the bath so as to interfere with the circulation, and it must be adjusted at the side of the bed or chair so that the patient shall feel entirely at ease.



For the lower extremity the bath is constructed somewhat differently; a side view is very much that of an equilateral triangle resting

on one angle, the opening being on the side that is uppermost. It is also provided with cover, stop-cock and rows of pins at the margins. The invention of this form of the bath is claimed by Billroth. At the suggestion of Dr. Hamilton, these baths have been much improved, especially the foot bath. The hinged legs and base have been replaced by a firm support, the stop-cock, as also in the arm bath, has been enlarged to prevent its becoming clogged by the secretions from the wound, and instead of the raised roll of metal that would press in the popliteal space, the edge has been

flared outward and so covered as to present a broad surface to the limb, and admitting of a submergence of about two inches more of the leg than by the former construction.

The baths with Dr. Hamilton's improvement may be obtained of John Reynders & Co., of this city.

Independently of Dr. Hamilton, Dr. Rose has also discarded the hinged legs and base of the foot bath, and has had one made of tin with a firm circular base.

In the case of the foot bath where it is found to be comfortable to project the foot from the side of the bed, the portion of the bed upon which the body reposes is elevated by matrasses, and the bath placed upon the floor of the bedstead.

The water should be kept at a temperature to feel warm to the hand of the attendant ; if when first put in the bath it is at a temperature of 100° F., it will generally need to be changed about once every four hours, of course the less the volume of water the oftener it must be changed. It would be well to use the thermometer more often than has been the custom, that the rate of falling of the temperature may be more accurately noted.

In case of a recent wound where secondary hæmorrhage is liable to occur, the limb is dressed for a few hours with warm or cold fomentations, and is left reposing in bed; but neither sutures, adhesive plasters nor bandages are applied. After all danger has passed, the warm water fomentations are continued or submersion is substituted. There is no objection to the patient's lifting the limb from the water at will, as the momentary change of position is a relief.

Submersion is only suited for the hand and arm to a few inches above the elbow, and for the foot and leg to a few inches below the knee. It has been stated that the wound should not be closed with sutures, as the swelling of tissues would cause them to tear out. This would be the rule with lacerated and contused wounds, but in some instances of incised wounds, I am informed by Dr. A. Rose, that they have been closed by sutures and immersed, and union by first intention obtained; the sutures, however, in such cases have been removed very early and before the œdema was great enough to cause them to tear out. Such results we do not

look for, however, by submersion, treating simple incised wounds with fomentations. Wounds after amputations have not been submerged, as in the exposure of the ends of large arteries there is a possibility of secondary hæmorrhage. Fomentations are here employed.

After submersion for about fourteen days, warm water fomentations are generally substituted, and continued until the wound heals. In a few cases, patients have been unable to keep the limb in the bath for more than six or eight days, on account of the pain produced. The only remedy for this is to remove the limb from the bath and use fomentations.

In using fomentations, the limb is wrapped in several folds of sheet lint or soft old muslin, saturated with warm water and covered with some material that will prevent rapid evaporation, such as oiled silk or sheet rubber. The water should be renewed about every four hours, or often enough to keep the lint moist and warm.

SUMMARY.—We have seen how, from the earliest ages which we have received any records of medicine, simple water has been used, both externally and internally, to allay inflammatory action; how Hippocrates, in the fourth century B. C., used warm water extensively; Celsus, about the first century A. D., recommended cold water for slight injuries, but if “inflammation is active,” warm water is to be employed; and Galen, in the second century A. D. used warm water in wounds.

In the seven centuries constituting the “middle ages,” water was used as a therapeutic agent, but subjective to superstitious ceremonies.

In the sixteenth century, Ambrose Paré recommended cold water. Lamorier, in the eighteenth century (1732), reports the use of warm water submersion in the treatment of an old ulcer on the ankle, and in two cases of suppurating wounds of the arm and hand. In the same century it was employed in Germany, having Theden as its special advocate.

In the present century (1808), we have seen with what satisfactory results five hundred soldiers suffering from gun-shot injuries, mostly in the feet, were treated with water-dressings by Treille.

Josse, of Amiens, about 1830, instituted irrigation, which was introduced in the Hotel Dieu, at Paris, by Breschet in 1834.

Sanson (1831) treated many cases of compound fracture with water, and by its use had prevented traumatic fever.

Twenty-five years ago, Amussat was the especial advocate of water treatment in surgery. He preferred a temperature of 64° to 68° F.

From that time down it has been used in a desultory manner by the French, but more generally by the Germans. It was employed very extensively in the army in the wars of Germany with Denmark, Prussia and France, a temperature being employed that should be most agreeable to the patient.

The present method of using water in Germany is mainly by submersion, according to the principles and method described by Dr. Max Schede, from whose paper I have so largely drawn in the foregoing pages.

The use of hot water in surgery having been suggested, as far as I have been able to learn, by Prof. Frank H. Hamilton, about a year ago.

From the experience given, I think we have ample testimony to the efficacy of water, and especially warm and hot water, in the treatment of surgical affections, such as lacerated and contused wounds, ulcers, sprains, compound fractures, after operations, etc.

As to cold water, 68° F. and below, it has been used to stop parenchymatous hæmorrhage and to reduce inflammation, both acute and chronic. Water at this temperature is a good hæmostatic, but, as Dr. Schede observes, it causes the patient great suffering. To be effective in the reduction of inflammation, it must be long continued, and reaction must be carefully guarded against; at 32° F. gangrene may be induced by the prolonged anæmia, caused by the contraction of the smaller arteries and the capillaries.

At a temperature of 77° to 86° F. tepid water, we have seen how the most severe of recent wounds may be successfully treated; inflammation prevented and gangrene restrained to those tissues only which were devitalized at the time of the accident, members being saved to the patient that, by other than water treatment, must have in all probability been amputated. This is demonstrated very

clearly in the cases of injury of the hand recorded by Dr. Shede. But wounds in which suppuration is already established, in which pus has burrowed, forming sinuses, cannot be treated as well at this temperature as at a higher, as the coagulated and retained pus undergoes decomposition and renders the patient liable to septicæmia, which, as far as I have observed, has not occurred with water at a higher temperature.

As hot water, 100° F., or above, however, I think we have a temperature suited to a greater variation in the condition of wounds than either of the temperatures before mentioned, or than even the temperature of 90° to 98° F., warm water. Hot water is an excellent hæmostatic, and is especially useful after an operation to stop the oozing from the cut surfaces of both flesh and bone. In recent injuries it prevents inflammation and traumatic fever. When erysipelatous inflammation has occurred, it has disappeared soon after the commencement of the hot-water treatment. Hot water is, however, especially useful in that class of cases where suppuration is already established, and where gangrene has occurred; in the latter condition it speedily restores the circulation of the dying parts, preventing the extension of gangrene, and causes a rapid separation of the dead mass; in the former it acts as a stimulant to the tissues, encouraging granulations which become *decided, bright and healthy* under its action.

Of the different methods of applying the water, submersion with warm or hot water has been found to be the best, where the wound is in a location to admit of it, as in the forearm, hand, leg or foot. If the wound is upon some other part of the body, fomentations are to be preferred.

There are many other conditions in which hot water is an excellent therapeutic agent. Bed sores have been cured by its application. Hot-water sitz-baths, I have found an excellent remedy in dysmenorrhœa; the patient to take a sitz-bath nightly for two weeks before the menstrual period; a repetition of the treatment before a second menstrual period, has caused the flow to take place without any intimation of it to the patient, the pain accompanying the flow during the first two or three months being entirely absent.

In treatment of inflammatory affections of the uterus, Dr. Thomas A. Emmet employs internal water douches at as high a temperature as the patient can bear.

In acute articular rheumatism, it is always worthy of a trial, not only to relieve the pain, but to improve the circulation in the joints and soften the tissues. Hueter says that "in cases of acute articular rheumatism, polyarthrititis synovialis acuta, the hot-water bath is to be recommended, and in gout, polypanarthrititis, I know of nothing better."

The history of a case of acute articular rheumatism, with heart lesion producing regurgitant murmur, as obtained from the family of the patient, is as follows:

A girl, five years of age, had been under treatment for three months. She had been confined to the bed during this time and was rapidly wasting away with the great pain that she suffered. The legs had become flexed on the thighs, and the thighs to a right angle with the body, and both limbs so abducted as to lie flat upon the bed, bed-sores having formed upon both external malleoli.

All internal remedies having been laid aside, and no tendons cut, hot-water treatment was instituted. Suffering too much to be removed to a bath at first, flannels were saturated with boiling water, wrung out and applied for an hour or two each day for a week; *hot baths* were then commenced, the patient being carried in a sheet and placed in water at a temperature of 105° F. After the first bath she slept for two hours and awoke refreshed and without pain—the first time in two months. After using the baths for two weeks, with manipulations of the joints, the patient was removed from the bed and placed in a reclining chair. The baths were continued for a month longer; she now remained free from pain most of the time, and when pain was experienced, it was promptly relieved by *hot-water* fomentation. The patient was now removed to the country, where she remained about two months, the manipulations and fomentations being continued. She was restored to the use of her feet and the use of crutches in about a month longer. Eight or ten weeks later, the crutches were taken from her, and she gradually obtained full control of her limbs.

The following case of atony of the bladder and spasmodic stric-

ture of the urethra, under my own observation, was finally cured by the use of hot-water sitz-baths :

The patient, a domestic, aged twenty-two years, had slipped at the top of a flight of six steps, struck upon the middle of the posterior surface of the left thigh, and slid to the bottom. A severe contusion was produced, but the skin was not broken ; experienced some shock, but soon recovered and went about her work. The next day she felt sick, her hands and feet were cold, and she went to bed. On the third day, having passed no water since the injury was received, about one and one-half pints were drawn with a catheter.

Urine was not passed naturally until the seventh day, when some pain was experienced, the catheter being used in the mean time twice a day. During this time she had felt sore and lame, as the result of the injury and the continuance of her house duties. There was also some loss of sensation in the injured limb. On the fourteenth day, acetate of potash was prescribed, somewhat increasing the quantity of urine and making it alkaline. Otherwise, from the eleventh to the eighteenth days, a small quantity was passed naturally once a day and the catheter used once a day.

As from this experience it became apparent that this treatment would have to be continued indefinitely, it was decided to make a change, and a hot sitz-bath at as high a temperature as could be was directed to be used upon retiring, the result of which was to induce natural urination, free from pain, about two hours after its employment. The sitz-baths were used for about ten days, by which time the urinary function was completely restored. I conclude that if the hot sitz-baths had been used at first, catheterism would have been unnecessary.

It is evident from the above experience that catheterism, so much objected to, especially by females, might in many cases be entirely avoided by the timely use of the hot sitz-bath.

The therapeutic uses of warm water, 70° to 98° F., and hot water, 98° to 110° F., could undoubtedly be much more extensively dilated upon ; but as I have not intended to write an exhaustive treatise on the subject, but simply to present in a compact form some of the facts in relation thereto, I will rest here.

ART. II.—*Certain points connected with Typhoid Fever.* By Dr.
F. C. CURTIS, M. D.*

It is not my intention to attempt to speak with any degree of fulness regarding typhoid fever, but rather simply to call attention to certain interesting phases and peculiarities of the disease which have fallen under my notice. The subject is one of interest at the present time, since the disease has prevailed to such a degree during the late summer and fall months that we may with propriety call it an epidemic.

The disease is, however, more or less endemic here, and sporadic cases occur constantly. I met with two or three cases in the spring months, and it must have been quite prevalent then, for I find by consulting the register of deaths since the last published report ending April 30th, which I have been permitted to do by the kindness of the city registrar, Mr. Dorlan, that eight deaths occurred from typhoid during the month of May. There was then a sudden falling off in the number of cases, three being reported respectively for June and July, and two in August. Then in September there were nine fatal cases, in October eight, and in November three, showing a rapid increase as the cool weather returned. It may be said that since April there has been an unusual tendency to disease of this type. In the last annual report of the city registrar, ending April 30, the whole number of deaths from typhoid is given as thirty-eight, about three times that number dying from scarlatina, and eleven from cerebro-spinal meningitis. In the year preceding there were but seventeen deaths from typhoid against one hundred and twelve from scarlatina and fifteen from spotted fever. The type of the disease this year has been rather mild according to my observation, and including the aborted and modified cases, which have been very numerous, the record of deaths does not present a fair exhibit of its degree of prevalence. I feel confident in saying that it has been unusually prevalent in our hands.

A search for the causes of this epidemic, if we may so call it, is attended with the usual obscurity of etiological investigations. It is seldom that one single cause operates to produce a disease; still, since typhoid fever is clearly not a prevalent disease in Albany,

*Read before the Medical Society of the County of Albany, Jan. 5th, 1876.

compared with other infectious diseases, naturally a special cause is looked for.

As is known to those who have read the very able discussion of the subject in Ziemssen's *Cyclopedia of Medicine*, by so distinguished an authority as Liebermeister, the possibility is there denied of the production of this disease otherwise than by a specific disease germ, it being maintained that while the decomposition of organic and excrementitious substances furnishes a soil particularly favorable for the development of these germs, it in no way originates the disease or becomes a focus of infection, except the germs be carried to it. This is at variance with the belief and former teachings of our most prominent observers and investigators into epidemics in this country. It precludes entirely the idea of its being propagated by contagion, as Watson teaches, and exposed swamp or pond bottoms, privies and clogged sewers, which have long been supposed, from the study of many epidemics in New England and elsewhere, to give rise to the disease by the simple reception into the system of their elements of decomposition, can only be considered to do so when the seed of this particular disease has germinated in them. The close observation and reasoning of German students has put to flight a great many time-honored doctrines, and I think this teaching will receive the assent of all when fully investigated.

It admits of a question, how much the use of our *river water* has to do with the increase of typhoid disease? The probability of this exerting a causative influence has certainly a degree of plausibility when we consider the manner in which it comes to us, and aside from the septic elements which the water no doubt contains, and also aside from the possibility of specific germs of disease entering the river throughout its length above this point, there is a peculiar facility for the stream to become the carrier of typhoid germs. It is well known that this disease is relatively much more prevalent on the other side of the river than this. Now, the main current of the river in its course down strikes the further shore at the upper part of Bath, thence it is deflected to this side, and coming very directly, reaches this side just at Quackenbush street. Directly at this point the city main, some

three feet in diameter, projects six or eight feet in the full current, and the water thus received is forced by the pump into the Bleecker reservoir. It would appear, with the premises, that an unexceptional opportunity is here afforded for the reception of typhoid germs. I do not wish to record myself as condemning the use of this water, but simply to bring the matter before the society as a question which ought to receive our careful and unbiased attention. Its adoption was a questionable matter from the first, and gentlemen will remember well the almost unanimous feeling against it among scientific associations of this city. It was very properly brought officially, by vote of the Common Council, before this society for an opinion. The feeling was against it, but no vote was taken, as the subject was adjourned to another meeting, and meantime it was decided to adopt it. Now, after several months' use, it is a proper question to ask, the river being frozen over and navigation closed for a season, whether it has been a cause of ill health. If it be true that the germs of disease are carried directly to each house, ready for their destructive work, attempts at cleanliness and avoidance of foci for germination will avail very little to protect us. I believe the water was first thrown into the reservoir to any considerable extent about the first of August. In September and October we find typhoid fever, as shown by the death report, to be much increased in prevalence. I have seen it occurring in various parts of the city. It has, too, appeared not by any means among the poorer classes only, but in the houses of the well-to-do, which are well provided in all points regarding cleanliness and hygiene. I have known of cases appearing in some of the best drained houses of the city, situated on high ground that has been long built over. It has been impossible to trace any local cause in many cases, and in this statement I am sure I shall be borne out. This, and the fact of its very general distribution, suggest at least the possibility of a general cause, and I do not know of any other that would act so generally. It may be added, also, that other of the most fatal of our acute infectious diseases, scarlatina, diphtheria and cerebro-spinal meningitis, have been comparatively infrequent, judging by the registrar's report.

On the other hand, however, we find that typhoid fever prevailed in the spring, before the pumps were used. It is only fair, also, to allow that the mortality from all causes, or from zymotic diseases alone, has not been excessive since the water was introduced. Besides, typhoid has occurred outside of the region supplied by the Bleeker reservoir. We must allow that our experience has not been sufficient to condemn the use of this water; but, inasmuch as contaminated drinking-water is perhaps the most common source of typhoid fever, and it seems evident that the Hudson river is extremely favorable to contamination, I would withhold judgment till it can be more fully shown that Albany is not to become a second Munich.

A point of interest in the consideration of this disease is where shall we draw the line of distinction between it and cases of simple gastro-intestinal irritation. Every one has in mind the typical course of this fever, its gradual onset, the steady access of severity, passing in the second week to the brown-furred tongue, immobile expression and dusky hue in rather severe cases, with moderate diarrhœa, the petechial eruption, etc.; finally, after the third week, the gradual abeyance of symptoms and the long convalescence from the prostration induced by so general pathological change of all the tissues of the body. It has, no doubt, been the experience of every one here that during the fall we met with many cases that were evidently *essential* fevers, the fever of the case being independent of any organic lesion. There was sometimes diarrhœa, often the opposite condition, anorexia, furred tongue, headache and backache, lassitude and depression, and various other symptoms in the different cases, the feeling being on the part of the patient that he had a very "hard cold" or a "bilious attack," as the case might be. You probably apprehend the character of the affections I allude to. They are not *abortive typhoid*, which begins as an ordinary typhoid, but the duration of the disease is markedly shortened. If we accept the teachings of Liebermeister, we are to believe that many of these were cases of typhoid poisoning, the disease pursuing a mild form, either from the character or amount of the poison or the constitution of the recipient, just as in cholera epidemics a more or less trifling

diarrhœa is very prevalent, or in the eruptive fevers we find all grades of severity. He even speaks of an "afebrile abdominal catarrh" due to typhoid infection, and has noted in some of them an enlargement of the spleen and the roseola faintly marked, constipation sometimes being present instead of diarrhœa. That many of these cases have actually been typhoid has sometimes been proved by the occurrence of intestinal hemorrhage, or some other alarming symptom, which may lead to an autopsy and the disclosure of typhoid lesions. A few cases are related of perforation of the intestine where symptoms were so insignificant as to be diagnosticated as simple intestinal derangement.

Liebermeister says that there is not a symptom of typhoid fever that is pathognomonic, and diagnosis is often difficult in cases that are not well marked, even from the general assemblage of symptoms. Dr. W. W. Johnson, in the last issue of the *American Journal of Medical Science*, proposes, "in order to reach a decision as to what is the feeblest manifestation of the typhoid infection: Does any combination of the most constantly associated symptoms, or does any one symptom, exist of necessity in typhoid fever? What is the most reliable symptom in the absence of all pathognomonic phenomena?" He weighs the various symptoms common to the disease severally and finds no one necessarily present in every case, even the most constant symptoms being frequently wanting. In regard to the symptom of fever, without which we can hardly conceive of the existence of the pathological processes which constitute the disease under consideration, and the absence of which particularly "so strips the disease of its familiar dress as to lose all semblance of its nature," he quotes from Liebermeister: "Typhoid fever in rare cases can arrive at advanced periods of its evolution and reveal itself suddenly by grave and even fatal accidents without the temperature, as determined by the thermometer, sensibly departing from the limits of the normal state." He then gives the notes of eight cases of varying degree of severity, but characterized for the most part by lassitude, slight headache, coated tongue, constipation, and followed by considerable emaciation, having a course of several weeks and the characteristic relation of morning and evening temperature,

but of low degree, being in one case no higher than 99° in the morning.

Such cases, it seems to me, hardly admit of doubt as to their nature, and I think we have always been accustomed, in this neighborhood, to regard them as typhoid. Dr. Gile, of Columbia county, an old, experienced practitioner, told me that he had always looked upon cases of continued fever lasting for ten days as typhoid. The question which I wish to propose is whether the numerous cases of a much milder disease which we met with last fall were of the same nature—hardly necessitating confinement to bed, having a gradual onset; there was dull headache and backache, furred tongue, anorexia, diarrhœa or constipation, more usually the latter, frequently a rather dusky hue to the face even when the patient kept about, the case not yielding readily to ordinary measures addressed to stomachic correction, but holding on for ten days or a fortnight, or even longer sometimes, before a return to health. I have met with three cases in one house and family. (By way of parenthesis, I will say here that in one of these cases there was abscess of the tongue, the only case of the kind I have ever met with, and showing a depraved condition of the system.)

Now, to claim the slightest connection between such cases and typhoid fever is to go counter to the explicit teachings of some most respected authorities. Trousseau, discussing the value of thermometric observations in this disease, quotes approvingly from Wunderlich: "When on the first or second day the morning temperature is 40° Centigrade or 104° Fahr., the disease is not typhoid; and when by the evening of the fourth day the temperature has not attained 103.1° Fahr., the disease is not typhoid." I am positive I speak the opinion of all who hear me in saying that the disease is not to be confined in such narrow limits, and rather that where the temperature reaches so high a range we have to deal not with a mild case, as Liebermeister says, but one of grave importance. Our form of the disease must differ from that occurring in Europe. I see reason to believe that cases such as I have spoken of, occurring as they do during the prevalence of typhoid fever, the occurrence of two or more cases in the same locality, the feeble manifestation of one or more symptoms of

typhoid, or the exhibition of a general 'physiognomy similar to that of our endemic continued fever in a dwarfed form considering, too, that we *know* that the poison of typhoid has a very variable degree of virulence in different localities or individuals, may we not believe that many of these cases are due to the poisonous influence of typhoid bacteria, and not to be called simple continued fever, febricula, bilious or gastric fever, or malarial, or simply gastro-intestinal irritation.

Where we shall draw the line even lowered so far, however, it will be difficult to say; for these disturbances in the functions of the system shade into each other until we come to those which may with all propriety be called ephemeral.

In this connection I would say a word concerning certain unusual cases, evidently of the nature of Typhoid fever, but showing a departure from the usual course of symptoms. One of these I will give: Ellen F., a chambermaid, æt. 20, living in a healthy locality in the immediate neighborhood of which no Typhoid fever had occurred—an anæmic girl, subject to occasional periods of malaise, lasting two or three days—was taken with what she regarded as one of her usual attacks of general malaise on the 24th of September. This continued for four days when she began to experience pain, intermittent in character, on the left side about the margin of the ribs, not so severe as to prevent sleep the night following, but next day became more severe and extended across the abdomen, being still intermittent. The bowels moved naturally, and there was no vomiting though nausea was present. Through the night following, the 29th, pain was very severe she said, allowance being made for her nervous temperament. She was seen early next morning, her countenance was rather anxious, face pale, decubitus dorsal with legs extended, pain described as most severe below the ribs on left side and extending across the abdomen.

Tenderness of abdomen was not marked. Half gr. doses of opium every hour relieved her by afternoon, and during twelve hours of the night only two grs. were taken, and there was little pain until next day at 2 o'clock P. M. During this quiet period her pulse was about 94. As the pain returned the pulse ran up

and there was a good deal of heat of skin. This subsided early in the night, aconite and sweet spirits of nitre being given, and she slept pretty well. Next day, October 2d, pain again found reduced, the tongue was rather dry and brownish but not furred—no headache—pulse 100 and full; temperature 100° F.; Resp. 24; evening temperature 101° F. Abdomen soft but somewhat distended and tympanitic. Bowels hard, not moved for three days, probably from the effects of opium of which only a small quantity was now called for, and a cathartic was ordered, which acted freely next day. Next morning, the 10th since the onset, pulse was 110; temperature 100.7° F.; R. 25. She had an apathetic look and there was a constant flush on one cheek; mind [perfectly clear; tongue of natural size, slightly coated with brown fur; breath had a disagreeable odor; pain still present on moving or inspiring deeply; evening temperature was 102° F. I had little doubt that the case was one of Typhoid. She was stimulated freely and sent to St. Peter's Hospital, when she came into the service of Dr. Hun. Her pain was so acute on the left side that he believed at first that it was a lease of pleurisy, and for a time she was greatly reduced. She remained in for six or eight weeks with low adynamic symptoms, and having, I believe, a good deal of the pain she early showed, with temperature as Dr. Kilbourne, the house physician, tells me, showing an evening exuberance of 102°, with morning remission.

I saw her after leaving the hospital; she was then much emaciated, and was still pale and weak, and has not yet fully recovered her strength. Judging from the thermometric range, the general course of the disease, its adynamic character and the emaciation following, I believe that this was an essential Typhoid fever, although the local pain, the cause of which I cannot account for, seemed much of the time so marked as to lead to the belief that it was entirely dependent upon a serous inflammation.

I saw another patient, a boy, ten years of age, under the care of Dr. Morgan, whose case appeared to be one of Typhoid, departing from its ordinary type. Here attention was at first entirely directed to the brain, the symptoms all pointing to meningeal inflammation, But as these gradually passed away leaving only a degree of stupor,

the low adynamic condition of Typhoid fever developed, running a complete, though mild course, ending in the usual long stage of convalescence so constant with Typhoid. Irregular cases such as these make diagnosis difficult. Still although authors may agree that there is not a single symptoms of Typhoid fever that is pathognomonic, yet there is something in the character of the disease, its physiognomy to use an expressive word of Dr. Wm. H. Draper's,—the Typhoid symptoms, the course the disease takes, etc., which even in masked and complicated cases speak as to the nature of the affection. All diseases are not by any means typical in their manifestations, and we are not to look for an unvarying sequence of symptoms to follow the reception of a specific poison into the system. An author speaks of the specific typhoid poison as producing *diseases* (using the plural) which differ among themselves, some being so serious that life is almost inevitably destroyed by them, others so trifling that patient and physician are in doubt whether there really is any disease at all. To be sure, we meet with many cases which are purely typical, but we are not justified, in the light of pathological investigation, in recognizing no diseases which depart from this type as related to them, and we are again and again forced to the belief, even from the clinical development alone of cases, that there are manifold forms in which Typhoid fever develops itself in different cases.

One case which I met with during the fall occurred in the person of a man 75 years of age. I speak of this as an unusual case, the disease as a rule affecting the middle aged. The subject was a remarkably rugged man, and this his fatal sickness was his first serious one. He died in the sixth week of asthenia, the disease being attended with marked depression almost from the first, the tongue being dry as parchment, and the mind wandering, and a stupor soon coming on from which he could hardly be aroused. It occurred to me in this case as it has before in others that when the vital powers are blunted by age there is not the acute sensibility to morbid impressions that there is at middle life when they are keenest, and if these impressions are made somewhat gradually they are frequently resisted, or rather fail to affect, and the patient lives on regardless of them as it were. I have noted the same thing

in very young infants sometimes, they exhibiting a tenacity to life that was very remarkable, and recovering when it seemed as if life had almost entirely gone out of them.

I have met with two or three cases which showed the deleterious effects of Typhoid fever upon the circulatory apparatus. One of these was a case of fatal weakening of the heart. The patient was a middle aged German, of small stature and spare frame, by occupation a cabinetmaker. In the latter part of August he was taken with mild initiatory symptoms of Typhoid fever, which developed gradually into a rather mild type of the disease. A dry, glazed condition of the tongue, some muscular tremulousness and slight wandering of the mind constituted the worst manifestations of the disease. By the end of September convalescence began, and a week later he was sitting up part of the day, and was in a fair way for recovery, until the middle of October, when some indiscretion on his part, probably eating a quantity of grapes without removing the pits, brought on a relapse, and a return of the old symptoms. There was no marked weakness of the pulse, nor had there been previously. On the morning of the third day of the relapse he was found to have had a very restless night, and there was a decided weakening of the heart, the pulse being rapid, quick and small. Stimulants in large quantity were at once ordered, but no effect was produced by them. The pulse became more and more thready through the day, the first heart sound was faint and he became weaker, the voice sinking to a whisper. Aside from weakness there were no marked additional symptoms. The mind was quite clear, there was no dyspnoea, and the patient had no thought of his approaching dissolution. He died about twenty-four hours after it was discovered that this weakening of the heart had set in. It is a point of interest that this condition should arise in a case which may fairly be considered a mild one, and aside from any exciting cause. It leads me to discredit the teaching of some that degeneration of the muscular tissue of the heart is produced in this disease as a direct result of the *fever heat*, and long continued elevation of temperature.

Another case of a somewhat similar nature, one of venous thrombosis, I saw a little later. Being irregular in its onset it was

not recognized at first as a case of Typhoid fever. The patient was a young man, of spare habit of body, by occupation a clerk. His sickness was traceable to a clogged sewer running under the store in which he was employed on Broadway. He was taken with very acute cephalalgia, continuing as the almost only symptom for a week or more. Symptoms more decisive of Typhoid fever developed gradually. Quite early in its course a rapid, weak, dicrotic pulse showed itself, and also with it the prostration peculiar to the disease. His treatment was tonic and stimulating throughout. He was confined entirely to his bed for about ten weeks. In the sixth week he was taken with chill, and severe pain in the calf of the left leg, followed directly by swelling of the foot, ankle and leg. Hot fomentations were applied with the effect of relieving the pain in good measure, but the swelling continued for two months, and there was after a little pain about the knee on attempting to straighten the limb which was held in a flexed position. There was no marked tenderness on pressure behind the knee joint. It is evident that in this case thrombus form in the popliteal vein, not higher than this for no enlargement of the saphenous could be detected, and there was no swelling above the knee the condition is a rare one. Liebermeister reports thirty-one cases of thrombi in 1743 cases of Typhoid, but one of which affected the popliteal vein. He says farther of it that it usually occurs during the period of convalescence, that the majority of cases are amongst men, and that it is much more frequent on the left side than the right, conditions which correspond with those obtaining in my case. The circumstance of its more frequent occurrence upon the left side is explained by the fact that the left common iliac vein being crossed by the right common iliac artery does not admit of so free a flow of the current of blood in this vessel as in that of the opposite side. The prognosis is good, death having been caused by it only by the occurrence of detachment of a portion of the clot, causing embolism of the pulmonary artery. In my case the recovery is now complete excepting slight swelling about the ankle which still remains.*

*Feb. 7th. He is still troubled with a swelling of the leg and foot, with pain in the part, since getting about his business again.

The same patient showed still another symptom of affection of the circulatory apparatus. Not long after the occurrence of thrombosis, while still in the extremely prostrated condition of his early convalescence, he was taken with chill following a little attempt at exercise, and with it rapid breathing and dyspnoea. The pulse became very frequent, quick and weak, and with its dirotism could hardly be counted. I might remark here that he had throughout his disease a troublesome cough coming on with the weakening of the pulse. It was believed that his dyspnoea was due to impending paralysis of the heart, not to pulmonary embolism. Heat was applied to the extremities, and stimulants ordered very freely. A wineglassful of whiskey, nearly 2 ozs. was given every two hours, and a subsequent attack coming on a few days later it was given every hour, with the effect of relieving the dyspnoea and bringing down the rapid pulse. There were three or four attacks of this character.

In regard to the use of alcoholics in Typhoid fever, I have seen reason to agree fully with Dr. W. H. Thomson, of New York, who in three very interesting lectures reported in the RECORD, enforces the teaching of Graves on this point, that is to give them only as the condition of the heart calls for them. In regard to the manner of giving, he says: "The dose must be such always as to increase the cardiac systole, and a few free doses are better than many small ones." I am fully persuaded that they should not be given in the early stage of the disease, before its weakening effect upon the system calls for a spur. I believe that it is only a spur, and not to be used until indicated by flagging of the vital powers. Still the pulse is not the only evidence of this, for no one would fail to begin with whiskey when the tongue becomes dry, sordes collect and the face becomes immobile with the Typhoid expression or lack of expression.

The value of thus abstaining I saw illustrated in a case of the disease at St. Peter's Hospital in September. The case was one of the most perfectly classical that we usually find, in its onset, course and manifestation of most of the peculiar symptoms. The lenticular eruption in particular was very abundant.

The patient, a woman, æt. 40, a domestic living on Elk street,

was brought in during the second week. It was a case of moderate severity. A grain of quinine every four hours comprised the treatment; no stimulants were given. During the third week, the tongue rather abruptly became dry and brown, muttering delirium came on and the general symptoms of the low condition of Typhoid poisoning ensued. A few decided doses of whiskey were at once given and very soon showed their effects, as she speedily rallied from this state, began to convalesce and made a very quick recovery. I do not believe that if she had been given whiskey at once from the time of entering the hospital that she would have felt the spurring that was called for, and there is no probability that she would have progressed in so happy a manner through the convalescing period of her disease.

The whole subject of Typhoid fever has appeared to me to attract an unusual degree of attention of late. A year ago the article by Liebermeister appeared in Ziemssen's Cyclopedia, full of new ideas. No one can study it without being impressed with the evidence of work and close observation. It has seemed that since then hardly an issue of a medical journal has appeared without more or less upon the subject.

So much study and investigation cannot fail to produce knowledge, and the more light is thrown upon this or any other subject, the more will erroneous ideas long held, give way to true ones and new facts be developed and given to us.

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ART. III.—*Medical Society of the County of Albany.* Semi-monthly meeting, January 5th, 1876.

Dr. HENRY MARCH, President, in the Chair.

Dr. McFALLS, of St. Lawrence county, was introduced to the society, and invited to participate in the proceedings.

Dr. FREDERIC C. CURTIS read a very interesting paper on *Certain Points Connected with Typhoid Fever*.—See Art. II (this JOURNAL).

Dr. BECKETT enquired how many more cases of typhoid fever had been noticed since the introduction of the river water. He said that it was noticed as early as last spring that typhoid fever was very prevalent, and it was laid to the river water. But this is not true, for river water was not introduced then. Typhoid fever

may be caused from other sources. Sand creek, which gave the main supply before, runs by the cattle-yards at West Albany, the highways, etc., and I have often seen numbers of cattle drinking from it. Dr. Curtis stated that typhoid fever had not been more frequent in poor families than in rich families. Lately, in the alteration of some houses in England, some of the water pipes were found to have been left open leading to the water-closet, and when the water was drawn off emanations from the closet arose. It may be the same here. Our water has been better since the river has been brought in the city than before. Before we say it is the cause of typhoid fever we need to try it longer.

Dr. BENJAMIN enquired what was the usual range of temperature in typhoid fever.

Dr. CURTIS replied that the temperature does not range very high. It is more important to observe the relation of the morning to the evening temperature.

Dr. BENJAMIN said his reason for asking was that in the recent case of Swartz vs. the Orphan Asylum, where disease was said to be caused by the emanations from the slaughter-house, Dr. E. R. Hun said it was not typhoid because the temperature ranged from 102° to 103° ; but he did not agree with the doctor, and was supported in his opinion by Dr. Swinburne. As to the river water, the doctor said he had an extended range of observation, but had had only one case of typhoid fever since its introduction.

Dr. CURTIS said in regard to the temperature, 103° was high. From 102° to 103° is generally found to be the range.

Dr. McFALLS asked if any gentleman present had had any experience with cold-water baths in typhoid fever or typhoid pneumonia.

Dr. JAMES S. BAILEY said in his early years of practice in Alabama, an epidemic of typhoid fever was prevailing malignantly on some of the plantations, and a physician went to a woman who had several negroes very ill with it and said if she would change her physician and employ him, he would have her negroes in the field in two weeks. She employed him and he kept his word, and in the specified time the negroes were in the field, but under the ground. The doctor used sheets wet with cold water.

Dr. MERENESS said that Dr. McFalls had related to him a very interesting case, on their way to the meeting, and he would like to hear the doctor repeat it.

Dr. McFALLS said the case recently occurred in his practice. It was a case of typhoid pneumonia which had prevailed in that section of the county. He was invited to see the son of a neighboring physician who was very ill. He found him in a critical condition, with low muttering delirium, temperature 103° , tongue dry and could not be protruded. As the case was so desperate and did not respond to treatment, Dr. McFalls proposed the cold bath. Wet sheets were applied instead of the cold bath. He also gave 10 grs. of quinine, then increased to 15 grs., and finally as high 25 grs., at one dose. The next morning, before leaving his patient, he ordered the treatment continued until his return the next day. Fearing the father might be afraid to use so large doses of quinine, the doctor, on his arrival home, sent a young physician to keep up the treatment. He returned on the morrow, and he found the patient doing well—temperature 102° . This, however, increased, and he gave 25 grains of quinine, which had the effect to reduce the temperature again. The right lung was solid almost throughout, but there was no cough. The case finally made a good recovery.

Dr. VAN DERVEER referred to the different modes of applying cold water, viz.: wet sheet, plunge bath, and, as Thompson recommends, by a cold-water bed. Spencer Wells uses after his operations for ovariectomy an ice-water cap, consisting of a simple rubber bag in different compartments which fit the head only. By a coil a stream of water was passed through the cap which had the desired effect. He thought it would answer well in cases of this sort.

Dr. MOSCHER said if he could find patients who would submit to the application of cold water, he would use it very generally, but he thought in this country the people are not educated in the use of cold water. It is a serious thing to use it in the treatment of scarlet fever. It is an important thing to reduce the temperature, and he favored the use of cold water.

Dr. COOK asked if in the use of cold water stimulants were not also used largely.

Dr. VAN DERVEER presented a specimen of meningeal apoplexy. The case was one of Dr. Papens', which had the following history. He was called to attend a case of confinement, the patient being young, aged 19, primipara. On examination, found the head presenting; remained a little while, and left with the understanding that should anything occur during the night to send for him. The next morning he was summoned and found the patient in a comatose condition. She was taken in a fit about four hours before his arrival. In about half an hour she had five or six convulsions. He saw her again in three hours more; her condition was unchanged, though not convulsed so often. She had been taking hydrate chloral; when taking the last dose she did not swallow. Three hours later the convulsions had increased. Treatment was suspended. Death took place soon after.

The specimen showed a clot in the subarachnoid sac around the medulla, and completely filling the ventricles. In Dr. Hammond's report of Vice-President Wilson's case he laid great stress on the clot around the medulla. A clot there will cause instant death. Dr. Beckett had had a similar case which he was asked to relate.

Dr. BECKETT said that the patient had had the day previous to his death a severe headache and continued until the next morning. About noon he asked for some beef tea, and arose from the bed and walked into an adjoining room and sat down. At that time he attempted to speak, fell over and died. At the autopsy a clot was found in the meninges, and all around the medulla.

Dr. VAN DERVEER then presented another specimen which was also from a patient treated by Dr. Beckett who related the history of this case also.

Dr. BECKETT said on the 20th of March last, the patient was taken with vomiting blood. Had several hemorrhages between that time and the 24th. From that time until June was pretty well, but then had another attack when riding in the buggy. He continued more or less ill until December when the hemorrhage destroyed his life.

Dr. VAN DERVEER reported the autopsy. John F., æt. 46,

butcher, body well nourished, several depressed white cicatrices were found on the lower limbs, and around the knees, also cicatrices on the glans penis. Body was opened by conical incision. In making the longitudinal incision a small cyst was found near the umbilicus, but no connection could be found between it and the abdominal cavity. No fluid in the abdominal cavity.

Thorax—left lung—Some slight adhesions were found at the lower part of the upper lobe, and also at the posterior part of the lower lobe. On section the bronchial tubes were found much congested with considerable œdema.

Right lung—Adhesions at the upper lobe. Same condition also present as in left; both crepitated.

Heart—Slight fibrinous clots in left ventricle atheromatous deposits on aorta and ulcerations on the inner coats, supposed to be syphilitic, walls of heart soft and tear easily. Weight without pericardium $1\frac{1}{2}$ lbs.; valves normal.

Abdominal cavity—Liver; firm adhesions of the upper surface of the upper lobe to the diaphragm. Adhesions of the under surface of the lower lobe to the ascending colon at its junction with the transverse colon. The organ was contracted—edges rounded, “hob nailed” and very pale in color. On section the granular condition could be seen.

Spleen greatly enlarged, weighed $4\frac{1}{2}$ lbs. Long diameter, ten inches; short diameter, $6\frac{1}{2}$ inches; thickness, 3 inches.

Kidneys—(left) Supra-renal capsule normal, kidneys large and waxy. The “large white” kidney. Capsule slightly adherent—long diameter, 6 inches; short diameter, 3 inches. Right same as left.

Intestines—Vermiform appendix normal. Four inches from ileo-coecal valve, small intestines very much discolored for the distance of 8 feet. Partially filled with blood.

Syphilitic cicatrices were found in the rectum.

Pancreas normal.

Stomach contained about three pints of fluid blood. No rupture of any blood vessel could be found, but mucous membrane was softened and congested.

Spine—A lateral curvature was found existing at the 1st and 2d.

lumbar verberæ which were twisted to the right on the third. The sacrum pointed in a line drawn from the right ear to the symphysis pubis. The variation of the column was 3-4 of an inch to the right of the median line. Dorsal verberæ inclined slightly towards the left. An exostosis was found projecting about 3-4 of an inch from the right side of the body of the seventh dorsal verberæ.

Adjourned.

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Correspondence.

ZUMBROTA, MINN., Jan. 9th, 1876.

Editors Buffalo Medical and Surgical Journal:

DEAR SIRs:—I will report a case which I think you will deem sufficiently interesting for publication in your Journal. The report of said case has been neglected until the present time, on account of each physician interested in the case waiting for another to write a report.

Case of Tracheotomy for the removal of a piece of clay pipe-stem from the right bronchial tube.

On the 14th day of October, 1875, a little boy, six years of age, while playing with a piece of clay pipe-stem in his mouth, accidentally allowed it to pass backwards into the Pharynx, and it entered the Larynx, dropping down the Trachia into the right bronchial tube.

Dr. McKinstry of this place was called, and used all the means at his command for the removal of the foreign substance. Dr. Hill, of Pine Island, and myself were also summoned, and we all agreed upon an operation as the only means of offering any relief to the boy. Therefore, we at once proceeded to perform the operation of Tracheotomy, and succeeded in removing from the right bronchial tube a piece of clay pipe-stem one and seven-eighths inches in length. The boy bore the operation well, and made a rapid recovery. Eight weeks after the accident he attended school, and all the scar remaining at the point of incision, is a slight line.

Very truly yours,

D. S. BRAINARD, M. D.

On the Use of Actual Cautery in the Enucleation of Fibroid Tumours of the Uterus.

Dr. Robert Greenhalgh, in a communication to the Royal Medical and Chirurgical Society (*Medical Times and Gazette*, Nov. 6, 1875), after briefly alluding to the infrequent use of actual cautery in this country, as compared with its application on the Continent, stated that during the last twelve years he had used it frequently, and with more or less success, in chronic enlargements with induration of the cervix uteri due to inflammatory or fibroid disease; in epithelioma and cancer of the neck of the uterus, where the organ is movable; in some cases of vascular tumour of the meatus urinarius; in slight cases of recto- and vesico-vaginal fistula; in incontinence of urine due to dilated urethral canal; and in cases of interstitial and intra-uterine fibroid growths. He expressed an opinion that diffused fibroid deposits of the uterus in the early stage were more amenable to treatment than was generally supposed. He observed that although the large majority of these cases needed no surgical interference, yet there were others which, through the great losses of blood to which they give rise or the mechanical effects they produce, imperatively demand such aid. The author then drew attention to the occasional ill-effects of dilatation and enucleation by the knife, and summed up the advantages of the actual cautery under the following heads: 1, Facility of application; 2, occasions but little pain; 3, rapid in action; 4, occasions no bleeding; 5, no plugging needed; 6, the charred opening not favorable to absorption; 7, no offensive discharge from charred surface; 8, opening readily dilatable and without bleeding; 9, permits of manipulation through opening immediately after its use; 10, by its use portions of the tumour may be rapidly destroyed, its size reduced, and its lower segments rendered conical, thereby facilitating of the opening and the subsequent detachment, expulsion, or removal of morbid growth. He then remarked that spontaneous expulsive efforts shortly followed its use, and the density of the tumours appeared to be more or less reduced after its application. The author, in conclusion, drew especial attention to the three following points: 1. The advisability of the gradual detachment of the growth from its surrounding capsule, especially in cases where the tumour is of large size, or where the patient has been much reduced by previous hemorrhages, by which further losses of blood are avoided and more perfect contraction of the investing tissues is secured, and the chances of pent-up offensive discharge is almost certainly prevented. 2. The removal of only so much of the tumour at each operation as is external to the opening, by which the opening is kept dilated and all chance of its closure upon the remainder of the growth avoided. 3. The speedy destruction by the cautery or removal by the craseur or hand of the tumour should sloughing ensue.—*Medical Abstract*.

Editorial.

Meeting of the Alumni Association of the Buffalo Medical College.

The committee in charge of the arrangements for the coming meeting of the Alumni Association have so far completed their plans that we can promise for those who attend, a meeting full of interest. All the gentlemen who have been requested to take part in the meeting have signified their intention to be present, and fill their portion of the programme. It is hoped, and from the replies which have been received to the circulars issued, may be confidently expected, that the attendance will be largely in excess of that of last year.

The Medical Department of the University of Buffalo has just cause to be proud of her record in the past, and all of her graduates, who have the interests of the profession truly at heart, should come forward and show that they will stand by their *Alma Mater* in the efforts which she may make in the future to advance her standard. There can be certainly but few, if any, of her Alumni who do not cherish toward her a sincere love and veneration. Toward those few she cherishes nothing in her heart but pity, that they have wandered from the paths of honesty and uprightness of purpose, and allowed themselves to be warped and twisted out of all semblance of what the true and honest physician should be.

Toward those of her sons who have kept the faith, who have held the name and fame of *Alma Mater* in honest veneration and respect, she reaches out her hands with a hearty welcome home, or an earnest "God bless you," as they continue on their journey.

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Owing to an unavoidable delay in getting matter into type, we are enabled to give our readers a brief account of the Alumni meeting and Commencement exercises.

The Alumni Association was called to order at ten A. M., February 23, by Dr. T. D. Strong, the retiring President, who introduced Prof. J. F. Miner, by whom the Association was welcomed in the following words:

Mr. President and Gentlemen of the Alumni Association :

I come in behalf of the University of Buffalo, my colleagues and myself, to welcome you to our beautiful and growing city, to these old familiar college halls whose memories of early struggles are never to be forgotten; to the warm greetings of friends and renewal of friendships which have grown stronger by time and change. I have come to welcome you to our firesides, our homes, and our hearts; to extend to you the most cordial and hearty welcome.

We greet you as our faithful and honored sons, as our pride, as our chief joy.

We exultingly point to you as our trophies; memorials of our victories; monuments of our highest achievements, and say, "Ye are our Laurels." Your individual records of professional attainment and progress combined, will comprise, in a great degree, the history of your *Alma Mater*, which has so signally honored itself in honoring you.

If the Buffalo Medical College takes pride in her honored and distinguished sons, is it not also true that to-day her thousand sons rise up and call her "blessed?" She is blessed in a constant and faithful progeny, whose annual pilgrimages to her honored shrine bespeak fraternal and mutual regard. Long may you cherish for each other the deepest sentiments of friendship and respect. Year after year, as you gather and receive fresh baptism from her pure springs, may you return again to your distant homes, more than ever to appreciate the value of professional honor, and the joys which spring from high aims and pure purposes.

May the day never dawn when your *Alma Mater* shall not exult in your prosperity, taking pride in your achievements. And, oh, may the sun hide itself ere any of the children of this institution would detract from the unspotted character, the fame and fair name of the Buffalo Medical College.

Again, I welcome you to the festivities of this occasion, congratulating you upon the banquet you have spread, the honored and distinguished names you have recorded, the importance and influence of the measures you propose. Wishing you all in your future lives the prosperity and success you so richly deserve, on this occasion a pleasant and profitable social reunion, and a safe return to your various homes, I bid you welcome, thrice welcome.

At the conclusion of Dr. Miner's remarks, Dr. W. W. Jones, the President elect, was introduced, and took the Chair.

The morning session was occupied in reading reports, the election of officers, and in listening to the President's address.

Dr. Jones, in his address, chose the topic of medical education. He spoke of the more prominent faults of our system, but at the same time was not blind to its many good features. He recommended, as the foundation to an improved method, that physicians exercise more discretion in choosing the students whom they admit to their offices. The address was an able and well-considered production.

The Executive Committee having recommended that a triennial prize of \$109 be offered by the Association for the best essay on some original research in any of the departments of medicine or surgery, the following gentlemen agreed to be responsible for the amount: Drs. H. D. Vosburg, T. D. Strong, Wm. B. Gould, D. D. Loop, W. W. Potter, E. N. Brush, H. P. Hall, W. W. Jones, C. C. Wyckoff and S. W. Wetmore.

The President appointed as a Committee on Prize Essays, Drs. H. D. Vosburg, T. D. Strong, Wm. B. Gould and E. N. Brush. The above committee organized with Dr. H. D. Vosburg as Chairman, and Dr. E. N. Brush, Secretary.

The essays competing for the prize must be handed in to the Secretary, No. 8 South Division street, Buffalo, N. Y., prior to January 1st, 1877, accom-

panied by a sealed envelope bearing a motto similar to that on the essay, in which is the name of the writer.

The officers for the ensuing year are as follows :

President—William W. Potter, Mt. Morris, N. Y.

1st Vice-President—Eugene Smith, Detroit, Mich.

2d Vice-President—W. P. Gould Lockport, N. Y.

3d Vice-President—J. W. Craig, Churchville, N. Y.

4th Vice-President—P. H. Clark, Ashland, O.

5th Vice-President—H. Nichell, Buffalo.

Secretary—W. C. Phelps, Buffalo.

Treasurer—Dr. C. C. Wyckoff, Buffalo.

Trustee—C. Diehl, Buffalo.

Executive Committee—W. W. Potter, *ex officio*; M. G. Potter, *ex officio*; A. H. Briggs, Buffalo; E. L. Shurley, Detroit; E. N. Brush, Buffalo.

In the afternoon session, Dr. C. H. Richmond, of Livonia Station, N. Y., read a paper on questions relating to sanitary science. In his paper Dr. Richmond dwelt upon the etiology of Elephantiasis Grecorum and Arabum, Endemic Hæmaturia and Chyluria; and spoke of the means which should be adopted for their prevention.

This paper was followed by a humorous poem by Dr. Fowler Brodnaeck, of New York, after which Dr. S. H. Benton, of Oil City, Pa., read a paper on Public Hygiene. At the conclusion of Dr. Benton's paper, a somewhat extended discussion was had, in which Drs. White, Hunt, Jones, Richmond, and others, took an active part.

The Commencement exercises at the Hall took place at 7.30 P. M.

The degree of Doctor of Medicine was conferred upon the following graduates :

John Grove Van Pelt, Williamsville; William J. Falkner, St. Catharines, Ont.; Arthur Benedict, Tonawanda; Ben. C. Wakely, Battle Creek; Frederick Lemuel June, Waterport; Chas. Henry Wetzel, Buffalo; Willis Barnard Gifford, Lee, Mass.; Walter D. Greene, Buffalo; Isaac A. M. Dyke, Belmont; Mrs. Mary B. Moody, Buffalo; Plympton Ayres Walling, Corry, Pa.; Charles Ambrose Young, Clarence; John E. Bradshaw, Rose; Arold Albert Freeman, Ripley; John George Miller, Strykersville; George Peter Richardson, Royalton; Wm. Jasper Packwood, Buffalo.; Walter R. Francis, Westfield, Pa.; Chas. Redway Dryer, Victor; Daniel Francis Everts, Farmer Village; Adam Bryan, Benzette, Pa.; John Louis Chewett Cronyn, Buffalo; Edward Austin Adams, A. B., Oakham, Mass.; Alvin Allace Hubbell, Leon; Burton Hill Putnam, Westfield; Fred. Eugene King, Trumansburg; Victor Albert Ellsworth, East Otto; Wm. Victor Miller, Buffalo; Wm. James Quinlan, Dunkirk; Chas. Pomcroy Graves, Westfield; Chas. Benj. Brown, Westfield; Joseph R. Laine, Grand Island, Neb.; Heyme Maddelage Werneke, Buffalo; Chas. Osmyn Chester, Buffalo; H. D. Vosburg, Lyons, honoraary degree.

The following prizes were also awarded :

The Fillmore prize, the first of \$30 to C. R. Dryer, for the best thesis; the second prize of \$20 to A. A. Hubbell.

The prize for the best examination in Anatomy, to B. H. Putnam, of a *post mortem* case.

The prize for the best report of Prof. White's lectures on the forceps, to Mr. Minges—a complete obstetric case.

The prize for the best report of Prof. Rochester's clinical and didactic lec-

tures on heart diseases, to Charles D. Shepard—a complete stethoscopic case.

Prof. Stodard's prize on *Materia Medica*, to C. R. Dryer.

Prof. Miner's prize for the best report of his clinical lectures on Surgery, to Mrs. Mary Moody—a Miner pocket case.

Prof. Moore's prize for the best examination in Surgery, to B. H. Putnam,

The address to the graduating class by M. B. Anderson, LL. D., President of the Rochester University, was a noble and scholarly exhortation to honesty of purpose and purity of life. It was listened to with admiration by all, and was somewhat out of the usual line of addresses on similar occasions. We regret that its being extempore prevents us from giving it in full.

Dr. Anderson was followed by Dr. Sanford B. Hunt, who gave an interesting and instructive address to the Alumni, holding up to them some of the founders of the Buffalo Medical College as noble examples worthy of emulation.

At the conclusion of Dr. Hunt's remarks the benediction was pronounced, and the Alumni Association adjourned to the Tiff House, where a richly-laden table awaited their coming. After the inner man was satisfied, toasts were in order, and the time was spent in speeches and songs.

The occasion was a very interesting one, and the large number present and the active interest manifested, shows that the Alumni of Buffalo Medical College do not forget their *Alma Mater*.

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Books Reviewed.

Cyclopedia of the Practice of Medicine. Edited by Dr. H. VON ZIEMSEN. Vol. V. Diseases of the Respiratory Organs. By Profs. JUERGENSEN, HERTZ, RUHLE and RINDFLEISH. A. H. BUCK, M. D., American Editor. New York: W. W. Wood & Co. 1875.

The subjects treated in this volume are Croupous Pneumonia, Catarrhal Pneumonia, Hypostatic Processes in the Lungs, Pneumonia from Embolism, by Prof. Juergensen. Anæmia, Hyperæmia and Oedema of the Lungs, Hemorrhages, Atelectasis, Atrophy, Hypertrophy, Pulmonary Emphysema, Gangrene of the Lungs, New Growths in the Lungs and Mediastinum, and Parasites of the Lungs, by Prof. Hertz. Pulmonary Consumption and Acute Miliary Tuberculosis, by Prof. Ruhle. Chronic and Acute Tuberculosis, by Prof. Rindfleisch.

In Croupous Pneumonia, Juergensen shows that the greatest danger is from the failure of the heart to perform its functions. One of the most active agents in producing this failure of the heart's action is the high temperature accompanying the disease. The author therefore advises the employment of

means which shall reduce the temperature. Cold bathing is freely employed, and quinia administered in large doses, as high as fifteen grains being given to a child under one year, at one dose, and seventy grains to an adult.

Prof. Ruble enumerates among the causative factors of tuberculosis, scrofula, and anything which depresses the general health, either hereditary or acquired. Hæmorrhage is not considered as productive of tuberculosis, but the author holds that when the blood is retained and decomposes, it may hasten a morbid process already commenced. The author also attaches considerable importance to the form of the chest in the cause of consumption, or perhaps we should say as one of the diagnostic signs by which its presence or probable danger may be suspected. It certainly seems that this is an important point for examination, especially where consumption has been present in other members of the family.

Rindfleisch teaches that scrofula and tuberculosis are identical; that the tubercular poison is located in the scrofulous glands; that when these glands become inflamed, local foci for the generation of tubercle is formed. The volume is full of interest and is fully up to the standard of those already published.

Lectures on Syphilis, and on some forms of Local Disease affecting principally the Organs of Generation. By HENRY LEE, Professor of Surgery in the Royal College of Surgeons, etc. Philadelphia: Henry C. Lea. 1875. Buffalo: T. Butler & Son.

The author says: "The principal object of the present work is to illustrate some of Hunter's doctrines which the lapse of time and the dissemination of more recent views have obscured or caused to be forgotten."

The author treats of the inoculability of syphilitic blood, the conditions under which the secretions of primary and secondary syphilitic manifestations may be inoculated naturally or artificially; the morbid processes produced by such inoculations; the modification of these processes in patients previously syphilitic; primary and secondary syphilitic diseases of the mucous membranes, and their liability to communicate constitutional syphilis; the essential differences of the morbid processes in which the constitutional and local forms of syphilis respectively have their origin; and the pathology and treatment of discharges from the prostrate gland, Cowper's glands, and the vesicular seminales.

The work is worthy of attention as discussing some points in the etiology of syphilis, which do not, perhaps, receive sufficient consideration. Some of the lectures have appeared either as a whole or in abstract in the journals, but their publication in the present form will make them more attainable by the profession.

A Text-Book of Human Physiology, designed for the use of Practitioners and Students of Medicine. By AUSTIN FLINT, Jr., M. D. New York: D. Appleton & Co., 1876. Buffalo: Martin Taylor.

In this volume Dr. Flint has condensed the material contained in the five volumes of his elaborate treatise on Physiology. In this shape the large amount of information contained in the larger treatise is placed in a condition more readily to be reached and applied by the student or practitioner. The present volume is greatly enhanced in value by the introduction of over three hundred finely-executed illustrations of the text. Some of these cuts are original, but they are largely drawn from the works of Hirschfield Bernard, Sappey and Kolliker, together with others. Some few illustrations are also introduced taken from the admirable photographs made at the United States Army Medical Museum.

The volume of the work is not taken up with discussions of non-essential and undetermined points, but in a clear, straightforward manner endeavors to present to the reader what is known concerning the various points of human physiology.

The printing and general style of the work are excellent, and reflects credit upon the publishing house from which it is issued.

On Poisons in Relation to Medical Jurisprudence and Medicine.

By ALFRED SWAINE TAYLOR, M. D., F. R. S. Third American from the third and thoroughly revised English edition. With 104 illustrations. Philadelphia: Henry C. Lea, 1876. Buffalo: T. Butler & Son.

The previous editions of this work, owing to the rapid advances constantly made in chemical and physical science, have fallen behind the times; and in order to meet the demand for a manual in harmony with the present condition of science, the author has thoroughly revised, and, in some instances, entirely rewritten portions of the present edition.

It is not presented to the profession as a history of poisons or poisoning, but as a simple manual for the use of students of law or medicine desiring to refer to such a work.

The author is a recognized authority on the subject of medical jurisprudence, and is widely quoted by other writers. The two former editions have been so favorably received, and at the time of their publication were so well in accord with what was best known in the department of which they treated, that we need only call attention to the publication of the present revised edition.

Books and Pamphlets Received.

Medical Diagnosis, with Special Reference to Practice of Medicine. A Guide to the knowledge and discrimination of Disease. By J. M. DaCosta, M. D. Fourth edition. Philadelphia: J. B. Lippincott & Co., 1876. Buffalo, T. Butler & Son.

A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M. D. Third edition. Philadelphia: Henry C. Lea, 1876. Buffalo: T. Butler & Son.

Extra-Uterine Pregnancy: its Causes, Species, Pathological Anatomy, Clinical History, Diagnosis, Prognosis and Treatment. By John S. Parry, M. D. Philadelphia: Henry C. Lea, 1876. Buffalo: T. Butler & Son.

The Medical Jurisprudence of Insanity. By J. H. Balfour Brown, Esq. Second edition with reference to Scotch and American decisions. Philadelphia: Lindsay & Blakiston, 1876. Buffalo: T. Butler & Son.

The Body and its Ailments: A Handbook of Familiar Directions. By George H. Napheys, A. M., M. D. Illustrated. Philadelphia: H. C. Watts & Co., 1876.

Archives of Ophthalmology and Otology. Vol. V., No. 1. New York: Wm. Wood & Co., 1876.

Transactions of the American Ophthalmological Society. Eleventh Annual Meeting. New York: Wm. Wood & Co., 1876.

The Practitioner. Edited by Lauder Brunton, M. D., F. R. S. Macmillan & Co., London & New York.

Statistics of the Births, Marriages and Deaths in the City of Philadelphia for the year 1874.

Transactions of the Colorado Territorial Medical Society at its Third and Fourth Annual Sessions, Denver, June, 1874-5.

Remarks on Intra-Uterine Polypi, with Special Reference to their Treatment. By A. Reeves Jackson, A. M., M. D. Reprint from the Chicago Medical Journal and Examiner.

The treatment of the Scrofulides (Lupus). By Henry G. Piffard, A. M., M. D. Reprint from the London Practitioner.

Transactions of the Twenty-Fifth Anniversary Meeting of the Illinois State Medical Society, May, 1875.

A Series of American Clinical Lectures. Edited by E. C. Seguin, M. D. Vol. I., No. XI. On the Diagnosis of Diseases accompanied with real or apparent Paraplegia without Muscular Degeneration. By H. C. Wood, Jr., M. D. Vol. I., No. XII. On the Nature of the Gouty Vice. By W. H. Draper, M. D. New York: G. P. Putnam's Sons.

Electro Therapeutics. By Z. C. McElory, M. D. Reprint from the Cincinnati *Lancet and Observer*, January, 1876.

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Original Communications.

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ART. I.—*The Etiology of Elephantiasis (Grecorum and Arabum), Endemic Hæmaturia and Chyluria.* By CHAS. H. RICHMOND, M. D., Livonia, N. Y.

[Extract from an Address on Sanitary Science, read before the Alumni Association of the Medical Department, University of Buffalo, Feb. 23, 1876.]

I wish to call attention to the etiology of certain diseases of common occurrence in tropical countries, in order that, by fully appreciating their real nature, they may at least be held in abeyance and be kept from more frequent observation upon our shores. I refer to the elephantoid diseases, Egyptian and Brazilian hæmaturia (bloody urine) and chyluria (milky urine).

In the investigation of this subject, I shall refer especially to the experience of Mr. T. B. Lewis, of the British military service in India, concerning the pathological significance of microscopic worms inhabiting the blood. I gave a synopsis of his discoveries in a review of his book* in the *N. Y. Medical Journal* for November, 1875, and I will now briefly state some of the points elicited by his investigations.

Lewis examined the blood of a large number of pariah dogs of

* "The Pathological Significance of Nematode Hamatozoa." By T. B. Lewis, M. B., Calcutta. 1874.

India, and discovered in about one-third the whole number experimented on *filariæ*, or minute blood-worms, resembling the *filariæ sanguinis hominis*, but which presents some slight points of difference in microscopical appearance. The nematode hæmatozoa occasionally found in man is about the same size as those found in the dog, namely: averaging 1-75th of an inch in length by 1-3500th in diameter. When first hatched, their size is much smaller. Lewis is of the opinion that they belong to the class known as the *filariæ sanguinolenta*, which, under favorable circumstances in the blood of dogs, develop into thread-like worms of from two to six inches in length.

The behaviour of the parasites within the body of the dog is quite interesting to study. They are probably received into the system by being swallowed in their larval state, and becoming lodged in the walls of the œsophagus, undergo development and migrate into neighboring parts, the aorta being more frequently infested. Tumors, composed of the larvæ or minute worms already hatched, are formed in the walls of the œsophagus and aorta varying in size from that of shot to a walnut. The blood does not seem favorable to the hatching of the eggs when deposited in that fluid, but it is favorable to their growth after they hatch and begin to develop in the tissues. It is not known that in man *filariæ* ever become so largely developed as do the hæmatozoa in the dog, but they migrate throughout all the tissues in the same remarkable manner as in the case of the wild dogs of India. It may be well to state that these parasites do not resemble, either in their anatomical formation or behavior within the body, the *eystieiræ*, *trichinæ*, or the *echinocoeci*.

So far as observations have extended respecting the salient phenomena produced by the migration of these nematoda in man, the fact is elicited that the principal are the escape of the nutritive fluids of the body from their proper channels—either the chylous or sanguineous fluids, or an obstruction to their flow. The escape may be either into the subcutaneous tissues or into an excretory duct. When the chyle is impeded in its passage, elephantiasis arabum (elephant leg) may result. Virchow and

Rindfleisch* both attribute this disease to obstruction of the lymphatics; if it escape into tissue sufficiently to interfere with the nutrition of the part or to induce ulceration, elephantiasis *grecorum*, or true leprosy is developed; if, however, the escape is into an excretory duct, as, for instance, into the ureter, chyluria is produced; when bloodvessels are perforated, sanguineous discharges or deposits may occur.

These pathological conditions, which have until recently been unexplained, have been found associated with the presence of nematode hæmatozoa in a sufficient number of instances, by different observers, to establish with a strong degree of probability a causative relation on the part of the latter. In one case has a microscopic nematode of a new species been found by Dr. Sonsius in the blood of a person suffering from Egyptian hæmaturia†; Dr. Wacherer has discovered a microscopic nematode in the urine of a person affected with Brazilian hæmaturia, and in no less than thirty persons with chyluria or elephantoid disease, or both, has Lewis found the parasite in the blood, excretions or tissues. It is not ascertained positively that the hæmatozoa found by the different experimenters are the same in nature. This is a point for future observations to determine.

In the case of *leprosy* all *facts*, so far as observation has extended in connection with its clinical history and pathological anatomy, are entirely compatible with the theory that the deposits are occasioned by a leakage of the chyle into the affected tissues.

1. It may stated that no age or clime is exempt from the disease, while in India and other tropical countries it is principally observed at the present time, within the past few centuries it has existed in Europe and America as far north as Norway and New Brunswick. At one time it prevailed as extensively in Norway as it ever has in any part of the globe.‡

2. It seems to occur irrespective of the kind of food employed or of the habits of life. The idea that it was produced by eating largely of fish, which at one time prevailed, is thought by Tilbury,

* Vide "Erichsen's Science and Art of Surgery." 1873.

† In his "Research concerning the Bilharzia Hæmitobia in relation to the Endemic Hæmaturia of Egypt," he bases his opinion upon an analysis of ten cases that that disease is due to the parasites.

‡ Vide "Aitken's Science and Practice of Medicine." Philadelphia, 1872.

Fox, H. Vandyke Carter, Farquhar, and other observers of leprosy, to have but very little, if any, influence in its production. Any single article of food long continued, or any diet which does not contain the necessary elements for the proper nutrition of the tissues, must exert some influence in the course of leprosy; but it cannot be shown to cause it *de novo*.

3. Microscopical and chemical examination of the deposits in elephantiasis shows that they correspond with the nutritive fluids of the body, influenced only by such changes as would be likely to be induced by admixture with inflammatory products, and by certain changes in the tissues themselves.

4. It is a disease propagated by inoculation.

Tilbury Fox, in his treatise on "Skin Diseases,"* includes four causes in the propagation of leprosy: 1. Intermarriage of lepers; 2. Hereditary transmission; 3. Inoculation and cohabitation; and 4. Vaccination (to a slight extent.)

In discussing these factors in turn, we may well inquire if they do not all resolve themselves into those induced by the ingestion of food or drink containing the elements of the disease, and inoculation. How far hereditary predisposition alone may influence the propagation of the disease is uncertain. It is true that a large number of children of leprous parents at some time during their life show signs of elephantiasis in some form, or milky urine; yet, with the numerous opportunities for the contact of children with their parents, it may fairly be questioned whether the supposed hereditary influence may not really be an inoculation. In known instances of infection by intermarriage, cohabitation and vaccination, inoculation of a *special element* in its production, whatever it be, is the only explanation tenable.

Assuming filariæ to be the sole element in the production of these affections, we have a reasonable explanation of all the phenomena observed in their etiology—that is, every pathological process observed in these diseases might readily be induced by migratory parasites, were they known to exist in the blood; furthermore, the known means of propagation of filariæ, as studied

* 2d Am. Ed., p. 320, *et seq.*

in the dog, is in accordance with the theory of inoculation and ingestion.

I am aware that perhaps the majority of writers do not recognize any pathological connection between elephantiasis græcorum and elephantiasis arabum, nor between these affections and chyluria; but when we remember that these affections occur in the same localities at the same time, and sometimes in the same individual at the same or at different times during his life, support will be lent to their close relationship, if not to their identity, as regards etiology.

The reasons why the same special cause affects different individuals in ways so diverse, are demonstrable, although it may be somewhat surprising that such diversities should exist. In the case of dogs affected with hæmatozoa, according to Lewis, some present a most miserable condition, while others exhibit no apparent deviation from health; hence it is to be inferred that the mere presence of hæmatozoa, within certain limits, in the blood may produce no noticeable effects. It is only when they exist in sufficient numbers to interfere with the capillary circulation, and when they migrate to other parts, that their effects are discernable. Possibly the filariæ is a native of the dog, so that less injury is induced in that animal than in man, on the same principle that trichinæ are innocuous in the rat and pig, but dangerous to man. In man the circulation of the blood and chyle may be impeded by tumors formed by the parasites, either in their larval state or while undergoing development; thus, if such stoppage occur in the kidney, hæmaturia may occur as the result of blood pressure; if a stoppage of the lymphatics of the thigh occur sufficiently to cause inflammation of those vessels, so a greater accumulation of lymph occurs than can undergo absorption, a rational explanation of the occurrence of Barbadoes leg is found.

An explanation of the frequent infection of the lymphatic system is found in the close anatomical relation borne between the aorta and the receptaculum chyli and principal lymphatics. The nearness of these lymphatic vessels to the ureters will account for a direct transfer of the chyle into those organs with milky urine if migration of the worms takes place in points favorable to such

transmission. Chyluria is usually temporary, with a liability to return, while the anatomical changes in elephantiasis of the leg, serotum, etc, are usually permanent. In true leprosy, in addition to the change induced by the escape of chyle into the subcutaneous tissues, and a bad hygienic condition which usually coexists, the nervous system becomes affected, probably either by direct attack of the worm or from encroachments of a nematoid tumor. Carter has found the nerves of affected parts in the anæsthetic form swollen and red in some instances, and translucent and firm in others. The infiltration or deposit surrounds the nerve-tubules, affecting the funiculus itself rather than the connective coat of the nerve. He thinks the affection of the nerves takes its origin in the peripheral branches and extends towards the central system. Both Danielssen and Bock, on the other hand, contend that the primary seat of the nervous complication is in the spinal cord, as they have found the cord and its membranes infiltrated with an albuminous deposit, the cord being indurated and discolored. They have also found the sheaths of certain nerve branches and ganglia similarly affected.* In the tubercular form of leprosy, the deposit is found in the fibro-cellular structures throughout the body.

Thus it will be understood why there may be so much diversity in the anatomical appearances occasioned by the presence of nematode in the system. But more than the one condition may co-exist, as has been stated. Lewis cites cases of chyluria which occurred in lepers of several years' standing, and in other forms of elephantoid disease, filariæ having been detected in both the blood and urine of the patients. Ewart, Coull MacKenzie, McConnell and McLeod,* have each had an example.

Although Lewis is the most extensive investigator of the subject, others have previously suggested the possible occurrence of elephantoid disease by the agency of parasites in the circulation. Fayrer, an extensive observer, makes the suggestion in his "Clinical and Pathological Observations in India," published in London in 1873; and Palmer, in the *Indian Med. Gazette*, vol. viii., 1873, advances a similar supposition.

* T. Fox, *log. cit.*

† *Indian Med. Gazette*, Aug., 1874.

The failure to demonstrate the facts herein stated until recently may beget doubts in the minds of some as to the verity of conclusions; however, when we consider the difficulties experienced in discovering the minute parasite, thorough microscopical skill being required, it is scarcely a matter of surprise that the essential element in the etiology of these affections has hitherto remained undiscovered. Besides, the parasite need not necessarily exist in deposits in case of elephantiasis, so that study of the morbid anatomy alone would tend to conceal the intimate factor. It seems, moreover, that the number of cases of these diseases in which the filariæ are found to be associated is sufficient to establish a relationship.

It is true that this question is now in its infancy, and it remains for future inquiry to complete and perfect our knowledge in this direction. Nor is it yet understood to what extent the diseases in question are preventable. We are thus led to consider, in a word, some of the practical questions to be deduced from these inquiries.

I am not aware that any observer has demonstrated the tenacity with which the filariæ of the human blood, or that of the dog or the ova cling to life; and until that point is determined, we cannot tell how far it is safe to admit lepers and persons affected with chyluria or hæmaturia into society. It is safer to adhere to the ancient law of Moses, which required the complete banishment of that class from society; and in addition, to place them within circumscribed limits, in order that the territory upon which sound individuals reside may not be in any way infected. The passage of all excrementitious matters, urinary and fecal, should be so regulated as to render it impossible for any animal to gain access to them, and that any parasites possibly excreted, or their ova, should likewise fail of gaining access to either man or animals. Intermarriage should be peremptorily interdicted. It may seem a cruel proceeding to separate families, and banish and forbid marriage to persons in comparatively good health, but who are subject to occasional attacks of milky or bloody urine, or who may be suffering from an elephant leg; but the future welfare of the human race warrants it for their protection, and it should be enforced.

It is better that a few in the present generation should suffer social ostracism than that the world hereafter suffer in consequence of the unnecessary propagation of some of the most loathsome affections known to man. All persons thus banished should receive good hospital treatment, and by cleanliness and the ordinary comforts of life, be made as happy as possible. As it is a question still open whether these affections are transmitted by hereditary influence, or by contact incident the filial relation, prevention of cohabitation or marriage with a leper cannot be insisted on too strongly, inasmuch as it is far from desirable to increase the number of that unfortunate class.

Wild dogs, in countries in which these diseases are rife, should be indiscriminately slaughtered and burned, or buried out of reach of any animal likely to feed upon them. Dogs were and still are regarded by the Orientals with abhorrence; and if we may rely upon the statements made in this paper, we should say, with much justice, all animals which, by future experiments, are found to contain nematoda, should be interdicted as food, and care should be used in selecting grain for flour, and be sure that it is free from smut.

The laws of uncleanness of the Jews, without doubt, had a purpose, and if understood in all their bearings, might, for the most part, with propriety be enforced at the present time. The prevention of the class of diseases herein discussed may properly be agitated in our country, for we know not how soon we shall be required to practice all the knowledge we may gain upon the subject.

It is for this reason that I thought it not altogether impractical for your consideration on this occasion. Should future research confirm the essential points herein advocated, we may feel that no time has been lost in a partial attempt to familiarize ourselves with this subject.

ART. II.—*Exercise as a Remedial Agent.* By H. R. HOPKINS,
M. D.

[Read before the Buffalo Medical Association, Dec. 7, 1875.]

GENTLEMEN :

My excuse for attempting to interest you for a few moments in the consideration of exercise as a remedial agent, is the fact that from the earliest days of the profession of medicine down to the present time, the profession has exhibited on one hand a tendency to empiricism, and on the other a determination to accomplish results and to seek truth by natural methods—that under the direction of empiricism, investigations of causes or conditions are neglected, and attention is fixed upon finding some external agent which will cure disease, that the empiricism of our forefathers, while not confined to, still finds its chief exponent in the Homeopathy of to-day.—On the other hand that scientific medicine works to-day by the same method adopted by Hippocrates, and seeks through a knowledge of the facts of anatomy, physiology, chemistry, histo-chemistry, and hygiene, to arrive at an intelligent pathology and a successful therapeutics.

That the former believe their successful cases are cured, while the latter see theirs recover—that the tendency of empiricism is to physic giving—while scientific medicine relies more upon the use of natural agents, as rest, exercise, nutrition fresh air and pure water.

That the study of medicine by the scientific method, has produced those glorious results, of which we are most justly proud—and is rapidly developing the crowning achievement of modern civilization, Sanitary Science.

The claims of exercise as a remedial agent, we will consider for the sake of convenience under the following heads :—Natural, Physiological and Chemical.

It will require no labored argument to prove that motion or action is among the distinguishing characteristics of life. That organized creatures are endowed with special apparatuses for executing various motions, that in the head of the animal kingdom this apparatus has reached the greatest state of complexity and perfection, and that his range of possible motions far exceed all others.

Neither is it necessary to more than state the fact that the existence of an organ, includes not only the possibility of its use, but the necessity for that use.

And that an organism can be said to harmonize with its environment only when each separate and particular part of that organism preforms the function for which it was created, and that the Adamic injunction. "By the sweat of thy brow shalt thou eat bread," finds its full interpretation in the revelations of modern science.

Says an eminent medical authority, "Respecting all the organs and functions this is to be observed, that alternate exercise and repose, strengthen them, while a continuance of either enfeebles."

From these axiomatic statements it is easy to deduce the proposition that the daily exercise of our voluntary muscles, to an extent approximating their whole power, is essential to the maintenance of health and a powerful influence in restoration from disease. That exercise stands in the same relation to health as does nutrition to growth.

In the examination of the physiological relations of exercise, we will, in obedience to its importance, first consider its influence upon the formation of carbonic acid, and the production of animal heat.

In order to make myself intelligible upon this point, it will be necessary to spend a moment in the consideration of the physiological position of carbonic acid.

Authorities all agree in placing carbonic acid at the head of the list of excrementitious products including such substances as urea, cholesterine and creatine, and also agree that it is the great exponent of the vitality or functional activity of the animal, that its production represents both the rate of action of a given organ or tissue and also the rate of nutrition of that tissue, that the force exhibited by an organ as its peculiar function or work, as the contractile force of a muscle, or the formation of gastric juice in the stomach, is the result of the conservation of energy set loose by chemical action, and that carbonic acid, is the most

frequent and abundant product of such action, and more than this, that the force of nutrition, by which tissue repair and growth are accomplished, is itself a derivative from this same source of power, the oxidation of the hydrocarbons.

The effect of exercise upon the excretion of carbonic acid has been most accurately observed in man and in animals, and all agree in the conclusion that exercise immensely increases its formation. Flint in his physiology estimates the quantity of oxygen absorbed by muscles at rest and in exercise, as shown by the quantity of carbonic acid exhaled as from one to two, to one to six according to the intensity of the exercise, and some experiments quoted by Dr. Abbott, in "Sources of Muscular Power," and subsequently referred to by Flint in "Relations of Urea to Exercise," fix the ratio of absorption of oxygen between rest and active exercise as one to seven and eight-tenths, that muscles in active exercise consume nearly eight times the quantity of oxygen they do when at rest.

When we recall that respiration is not performed in the lungs, in the blood, nor yet in the capillaries, but in the innermost parts the organic molecules, of which our tissues are composed, and that respiration is essentially the act of supplying to these molecules the oxygen, which is their life, that respiration is the nutrition of the tissues, and then remember that exercise increases the absorption of oxygen from two to seven-fold, we can no longer withhold from it a chief place among remedial agents.

The influence of exercise upon the production of animal heat is inseparable from its influence upon the production of carbonic acid. I cannot undertake to place before you the history of scientific research, or the theories regarding the causes of animal heat, but will briefly state the views held by physiologists of the present.

That the heat of the body is not formed in the lungs, nor in the liver, nor caused by the friction of the blood, nor by the action of ferments, but as demonstrated by Lavoisier and stated by Papilion, "this heat originates in the totality of those chemical transformations which are going on unceasingly in the depths of the animal organs, and are bringing about the continued renovation of the whole organized substance."

Both physiologists and pathologists are well aware of the importance of maintaining in the body a normal supply of heat and experiment has long since demonstrated, that a loss even of a degree seriously impairs the performance of the vital functions, and has also demonstrated that exercise produces an increase of animal heat, and that in a marked degree.

The manner in which exercise does this we can readily see by its influence upon the formation of carbonic acid.

C. Hanfield Jones reports in the 21st volume of the Transactions of the Royal Society, experiments which he conducted upon thirteen healthy men, and as the result of his observations concludes that moderate exercise raises the temperature of the body in a marked degree. In the cases under his observation the average was 1.8° . The importance of this rise in temperature of the blood cannot be overestimated it having long since been demonstrated, that heat acts as a direct stimulant to all the vital functions, and that a certain temperature is absolutely necessary even for their existence.

Experimenters also agree that long sustained violent exercise is attended with a marked diminution in the quantity of carbonic acid excreted, and a corresponding fall in temperature.

Flint offers this as part explanation for the low temperature he observed in Weston during his five days walk. The average of the five walking days being two and seven-tenths degrees below the average of the five days before the walk.

The observation on the first day showing a fall of 4.3° , and on the second day a further decline of $.5^{\circ}$, the temperature on this day being 94.8° giving for the two days a decline of 4.8° .

Inasmuch as these experiments undertake to have settled some of the most important points in physiological chemistry, they should be subjected to the most rigid scrutiny, and I submit that it is unscientific to accept as the index of the normal relations, between exercise and urea, phenomena which took place in a body of a temperature 2.7° below its normal point, and 1.2° below the limit compatible with health. That it is impossible to arrive at physiological truths from observations upon a body in a pathological condition.

But it is not through experimental or theoretical physiology that exercise as a remedial means will win its way to the regard of our profession; that can only transpire through the concurrence of clinical observation.

This is as it should be. Clinical observation is the way, and the only way, in which the principles derived from physiological, histological and hygienic observations can be verified.

Says Flint, in speaking of the treatment of Pulmonary Tuberculosis, "I rank exercise and out-door life far above any known remedies for the cure of this disease. * * * So deeply impressed am I with the correctness of this view of the regiminal management of disease, that I cannot express myself too emphatically in trying to enforce its practical importance."

Tilt, in *Change of Life*, claims for exercise "the power of relieving the congestion of internal organs by transferring the blood to the limbs, of depleting the skin by increasing the perspiration, of increasing the excretion of urea, of exhausting those redundant energies which, however little understood, when unemployed produce that sliding scale of phenomena, fidgets, nervousness, temper, hysteria, insanity.

Trousseau, in giving the treatment of diabetes, hepatic colic and gout, says "exercise must be religiously observed, and cannot be too highly recommended."

Bennett, Watson and Aitken all bear testimony to the beneficial effects derived from exercise in the treatment of gouty or scrofulous conditions.

Murchison, in "Functional Derangements of the Liver," finds in lithæmia, a condition, caused by a deficient supply of oxygen to the tissues, as the result of which, the oxidizing processes which go on in the liver and elsewhere are imperfectly performed; causing an increased quantity of lithic acid in the blood; and sees as the result of this condition (lithæmia) numerous diseases, which involve almost every tissue and organ of the body. Murchison recognizes as the cause of this lithæmia, among other elements, insufficient exercise in the open air, which acts chemically, by diminishing the supply of oxygen to the tissues, and mechanically by retarding the circulation of blood through the liver, Bernard

having proven that deep inspirations have a powerful influence upon the blood current through the portal vein. This vein having no valves, and being obliged to do the work of an artery with the structure of a vein, is quite dependant upon the suction caused by deep inspirations.

Murchison regards oxygen as the antidote of the *materies morbi* (lithic acid), and places exercise in the open air as a means of pre-eminent importance, both as a therapeutic and as a prophylactic.

Thomas J. Graham, M. R. C. S., in "Treatment of Indigestions and Best Methods of Improving Health," recommends exercise in the open air, in the treatment of dyspeptic, neuralgic, billious and gouty conditions, as a more efficient means than diet or medicine, or both combined.

Samuel Wilks, in the September number of the *London Lancet*, appears in an article full of positive statements bearing upon this question. In reading this article, you are impressed with the idea that he speaks from profound conviction, and not only means what he says, but more than he says. So much does this article please me, it having come to hand after I was well into my reading upon this matter of exercise, that I cannot resist the temptation of quoting the following lines:

"Now, if the question be put thus broadly, Are people suffering from over-work? I, for one, should have no hesitation in saying No. But, on the contrary, if both sexes are taken, I should say the opposite is nearer the truth, and that more persons are suffering from idleness than from excessive work. Medically speaking, I see half-a-dozen persons suffering from want of occupation to one who is crippled by his labors.

"I have, then, very little sympathy with the prevalent notion that nervous and other disease are due to overwork. * * * The human body is made for work, physical and mental. The amount of work it can do is of course proportioned to the power of the machine; but, unlike all other machines, its strength is only maintained by use, as assuredly it rusts and decays by disuse. Just as the muscles are better prepared for work by previous

training, so the nervous system, whether it be the brain or spinal cord, becomes more energized by use. * * *

"In short, in my experience I see more ailments arise from want of occupation than from overwork; and taking the various kinds of nervous and dyspeptic ailments, which we are constantly treating, I find at least six due to idleness to one from overwork."

Chambers, in his valuable work, "Indigestions," in speaking of what can be done for the treatment of those organic diseases which are usually considered incurable, says, "It is seldom too late to try and administer to the failing organ *the most potent of all remedies*, the human blood of the patient himself made healthy by the means adopted, and flowing in continuously by its own natural channels."

Gentlemen, that sentence contains more wisdom than many whole volumes, and it is in carrying out this thought that exercise becomes valuable. Taking hold as it does of the very foundations of organized life, the use of oxygen in the tissues, we are prepared to find what we do find, that it stimulates and increases, in general and in particular, those functions which in their totality we call nutrition, and when available, should be used in all cases in which defective nutrition exists either as a primary or secondary condition, results having shown that proper exercise exerts a more powerful influence over this condition than any other agent at the command of our profession.

You will pardon me if I go somewhat beyond my subject and add a few lines upon Exercise as a Prophylactic; and if my excuse, that the profession have a tendency to disregard the power of exercise as a remedy is valid, I will add, that as a profession, we are wasting a golden opportunity of demonstrating our familiarity with the principles of preventive medicine, and of serving our patrons, as scientific medical advisers, by failing to impress upon them the power and importance of exercise as a prophylactic. That our profession has failed in this direction, you will appreciate by referring to Flint's chapter upon Prophylaxis, and find that in the enumeration of preventive measures exercise is not even mentioned.

This is in strong contrast with the utterances of the English

writers of similar reputation, they seem to be troubled to find terms of sufficient strength, in which to express their appreciation of this element of hygiene. Says John Cheyne, F. R. S., as quoted by Graham, "The weak and valetudinary, the studious and contemplative, ought to make exercise a part of their religion." Says C. Hanfield Jones, "The capacity to resist or endure fatigue well indicates *cæteris paribus* a like power to resist or endure disease well."

History tells us that nations are at first weak and poor, that from their weakness they are obliged to practice industry, frugality and temperance, that through obedience to these hygienic laws they arrive at strength and opulence, that for reason of wealth they forsake the laws of hygiene, and become luxurious, self-indulgent and effeminate, that from this follows loss of strength, health and wealth, when the history closes with the disappearance of the people, or they by reason of weakness and poverty return to their obedience to the laws of hygiene.

Does not the history of our own country show us that we are passing through this same scale, that as a people the danger of wealth is upon us, and that the medical profession is the watchman upon the walls, that each individual member of that profession has a duty he owes to humanity, to his country, to his profession and to himself, to imbue his patrons with the true knowledge of the importance of the daily observance, of the laws of health.

Who can doubt that the influence of Abernethy and Abercrombie, Sir Astley Cooper and other fathers of English medicine, has been a powerful factor in forming the habits of that people, and giving them that taste for out-door exercise which in turn has secured their bodily vigor, and enabled them to resist for centuries, the physically depressing influences of wealth.

In conclusion let us turn from the general and theoretical to the special and practical, and consider a case illustrative of the remedial power of exercise. It is well known to most of you that for the past eight months I have been suffering from a severe lichenous eczema which has resisted the usual means recommended for such troubles. My medical adviser, Dr. Folwell, an expert in diseases of the skin, after some time spent in the investigation of

the case, became convinced that the cause of the disease was a fault in assimilation, and this belief was confirmed by an examination of the urine, which was found of a specific gravity of 1030 and loaded with lithic acid. We now congratulated ourselves that the key of the case was well in our hands, and that the condition would soon yield. Accordingly the diet was carefully regulated, tonics Quinine, Arsenic and Strychnine were given and diluents and ant-acids as Muriate of Ammonia, Acetate of Potash, Citrate of Lithia, were persistently exhibited, but without benefiting the condition which after the second month was associated with an intense stomach indigestion.

The above treatment was supplimented by vapor baths and a week of rest in the country. Of the effects of the latter remedies I have happy recollections.

This treatment extended over the space of four months, at the end of which time my indigestion was confirmed and my skin disease no better. Soon after the beginning of the fifth month my physician being quite out of conceit of medicine, advised me to try the effects of exercise, and I selected as an available means a recent invention the Health Lift, and began exercising at once giving to it half an hour each day, have continued the same up to the present time and with the happiest effect. My indigestion yielded from the first and has not returned; within the first week my urine fell to 1010-1012, with a natural reaction, and that with no other diuretic than a glass of water drank at retiring and on rising; my general feelings have been wonderfully improved and and my skin disease is well, and this notwithstanding, that during this time I have had an increased amount of professional labor and anxiety

From my personal experience and from the result of my observations of its effects upon several of my patients, I have no hesitation in recommending this means of exercise as economical of time, perfectly under control, and in general, as more scientific than any other at our command.

ART. III.—*Ligation of the Carotid Artery for Injury.* Report of Case by E. T. DORLAND, M. D.

The occurrence of a case like the following being, I judge, exceedingly rare, and in some of its features very interesting, I send it for publication. For a still more important reason I deem it worthy of reporting, in that it demonstrates the practicability of ligating some of the larger arteries of the trunk in secondary hemorrhage. In Vol. 1st, page 266, Eriksen, writing in the subject of secondary hemorrhage after the ligation of arteries in their continuity, states, "If the artery be situated in the trunk, as the subclavian, carotid or one of the iliaes, there is nothing to be done but to trust the plugging of the wound, and, in a great majority of cases, the patient will die, exhausted by repeated hemorrhage."

The patient, Mathias Lavyea, was injured, Aug. 27th, 1875, at the Erie Railway Shop. The injury consisted of a fracture of the malar, superior maxillary and sphenoid bones. The patient was first visited by Dr. Mixer, who applied a compress and bandage to hold the malar bone up in place. The patient improved rapidly, and was able to be out in a few days from the receipt of injury. Dr. Lynde took charge of the case on the 30th of August. The pupil of the left eye was dilated and the pulse was irregular. These conditions continued from the day on which he was injured until his death. On September 10, a pulsating tumor made its appearance under the left eye, completely filling the antrum and lifting the malar bone. This tumor rapidly increased in size, and a consultation was held, consisting of Drs. Mixer, Briggs, Harding, Oldfield and the writer. Preparation had been made for the ligation of the carotid, but it was thought best to postpone the operation a few days and watch developments. On the 13th, 14th and 16th of September, arterial hemorrhage occurred from the nostrils. On the night of the 16th this hemorrhage came near being fatal.

On the morning of the 17th of September, Drs. Lynde and Briggs plugged the nostrils anteriorly and posteriorly. This failed to control the hemorrhage, and on the afternoon of September 18, Dr. Lynde, assisted by Drs. Mixer, Baker, Briggs, Harding and myself ligated the primitive carotid, after finding that pres-

sure on the internal and external carotid separately failed to control the pulsation. The patient was comfortable for the next two weeks, excepting that he suffered with a severe diarrhœa, which came on the third day after the operation, and lasted for three or four days. On the tenth day after the operation, the wound was entirely healed, except at the point of exit of the ligature.

At this time, Dr. Boardman kindly visited the case, and observing the condition of the patient, suggested that a strong light be brought before the eye to test the susceptibility of the retina to impressions. The pupil was but little changed from its previous condition by the test. Similar experiments, subsequently made, were invariably followed by the same results.

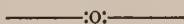
The objects for which the ligation was undertaken were fully accomplished, viz : the arrest of the development of the aneurismal tumor, and the control of the nasal cavity.

Excepting a slightly irregular pulse and the dilated pupil (as before mentioned), the patient appeared now entirely well. Not a symptom had occurred during this time to indicate that the brain had suffered from the ligation of the artery. On the morning of the fourteenth day after the operation slight arterial hemorrhage took place from the wound at the site of the ligation. This hemorrhage increased in the afternoon, and at three o'clock Drs. Lynde, Harding and Wasson etherized the patient and made preparation to open the wound and reapply the ligature if necessary. But traction on the ligature failing to remove it or to produce any increase of the hemorrhage, the patient was placed in bed and hopes entertained that the bleeding came from some small vessel. No more hemorrhage took place from the wound until 7 P. M., when it was decided by Drs. Lynde, Harding and myself to apply a compress. At midnight the hemorrhage became more profuse, and when partially controlled by pressure with the fingers, the areolar tissue became infiltrated with blood. So rapidly did this infiltration take place, that before preparation could be made to open the cicatrix and apply the ligature, the tumor had attained a size nearly equal to a man's fist. Dr. Lynde at once laid open the wound. The bleeding was found to come from the

ligated vessel. The ligature, being slightly pulled on, came off, followed by a terrific hemorrhage from both ends of the artery. In the distended condition of the soft parts, this hemorrhage could not be materially lessened by pressure above and below the point of ligation, but by placing the finger directly upon the artery, the hemorrhage was controlled. The finger being kept in place upon both ends of the artery, a large tenaculum was made to penetrate the walls of both these ends, and by as strong traction on the tenaculum as the coats of the vessel would admit without rupture, the hemorrhage was so far controlled and the ends of the vessel so far elevated as to admit the passage of the aneurism needle; first under the proximal end, and ligation of this being accomplished, the distal end was secured in like manner. The wound was now closed by the interrupted suture, and the patient allowed to rest, after suffering the most frightful hemorrhage I ever witnessed at a surgical operation. The next morning we found our patient comfortable, and without an untoward symptom. He continued to do well for eleven days, when a profuse hemorrhage again occurred in the night, but this time only from the distal end of the artery. Dr. Lynde, assisted by Dr. Harding and myself, by lamplight, etherized the patient, opened the wound (which was healed), and again proceeded to ligate. The artery, giving way up to the point of bifurcation into external and internal carotid, required two ligatures—one for each branch. These having been applied by means of the tenaculum and an aneurism needle, the wound was closed with interrupted sutures, and the patient put into a comfortable position and allowed to rest for the remainder of the night. The next morning we found our patient comfortable. Without one unpleasant symptom (always excepting pulse and pupil), he passed the next two weeks happy and hopeful. At the expiration of this time, the ligatures came off without a stain of blood. The patient was now apparently well, sitting up most of the time, with good appetite, and inquiring when he could go to work. He continued to improve until the 3d of November, when, without one premonitory symptom, he had a severe chill, followed by high fever, pain in the head, delirium, coma and death.

A post mortem examination was made on the 6th of November

by Drs. Lynde, Mixer, Kamerling, Dagenais, Harding and myself. The following notes of the post mortem were furnished by Dr. Harding: Dura mater congested and adherent to pia mater. The latter was clouded with lymph and pus. The ventricles of the brain contained serum and pus—conclusive proof of inflammation. The brain itself was healthy in appearance. There was a fracture of the left greater ala of the sphenoid bone, extending into the left superior maxillary. The malar bone was also badly fractured. The left primitive carotid was filled below the point of ligation with a plug of lymph and blood. The wound made by the operation was healed. The other vessels, and the nerves in proximity to the artery, were uninjured and healthy.



ART. IV.—*Buffalo General Hospital. Notes of Surgical cases.*
By CHARLES C. F. GAY, M. D., Attending Surgeon.

FIBROUS POLYPUS OF THE NOSE. AVULSION BY A NEW METHOD.
—Mrs. —, aged 35 years, entered Hospital April 30, 1875. She had a large fibrous polypus of the right naris from which she had frequent hemorrhages; bleeding is provoked by the most delicate touch with the silver probe. Its attachment was far back toward the posterior nares. I passed the fore-finger of my right hand into the anterior naris, crowded the polypus up and back through the posterior naris, and with the finger nail detached the quite firm connections of the tumour from the turbinated bone; when it dropped back—a large mass—into the mouth. The finger was retained in the naris for a moment after the polypus had escaped.

REMARKS.—Avulsion by this method was quickly accomplished and hemorrhage was avoided. A few weeks before this case presented itself I had removed a nasal polypus, or a large portion of it, by torsion with the forceps. The hemorrhage following the operation was profuse, and not having means within reach to arrest it, I immediately thrust my fore-finger, its entire length into the naris, holding it there a few minutes, when, on its withdrawal, all bleeding had ceased. It was this experience that led me to adopt the method for avulsion in the case now at hand.

The writer does not claim this method as the best by any means, for the removal of nasal polypi, but it answered the purpose in this case admirably. The mode is applicable, I think, to all cases of gelatinous and cystic nasal tumours, and in cases of fibrous tumors with even strong and ancient attachments; it ought, in some cases to be tried before resorting to other modes which are so often vexatious and unsatisfactory. The objection that the detached tumour might perchance lodge where it would produce death by suffocation, is really no objection at all, provided the tumour be large and the Surgeon on his guard against any such danger.

CURVATURE AND HYPERTROPHY OF THE NASAL SEPTUM.—This deformity existed in a female, aged 22 years. The right naris was entirely occluded and besides the constant annoyance which this caused, there was also existing an unsightly malposition of the nasal septum; a bulging out upon the right side with correspondent depression on the left side the nose. So unsightly and troublesome was the condition of this patient's nose, that no urging was required to induce her to submit to the ordeal of any surgical operation that promised improvement.

Accordingly, chloroform was given and an incision made close upon the border of the septum about three-quarters of an inch in length, thus laying open the cavity of the naris. The cartilaginous portion of the septum was now pared down fully one-quarter of an inch, care being taken not to perforate the septum. The wound was dressed and united by primary union; the deformity was much relieved, air passed up through the nostril, but all the advantage that could be desired, from the operation, was not obtained on account of the hypertrophic condition extending so far back as not to be easily reached with the knife.

MORBUS COXÆ.—RESECTION OF HEAD AND NECK OF THE FEMUR. RESULT.—A boy, aged seven years, entered the Hospital April 11th, 1875, with morbus Coxæ, of two years duration. The cause of the hip-joint disease was supposed to be of traumatic origin; from a fall down stairs, since the boy complained of pain which he referred to the hip after the fall. There are three sinuses reaching down to the left hip joint. Suppuration has been, and

is now copious. The boy is emaciated from the purulent discharge; has suffered much pain, especially when moved, and has been confined to his bed for a long time. He has been taking Quinine gr. j. three times daily with cod liver oil.

On May 25th the boy, from use of the tonic treatment, had so much improved, as to warrant the performance of an operation for resection. This was done in the presence of most of the members of the Medical and Surgical Staff of the Hospital in the following manner: I made a longitudinal incision in the axis of the head and neck of the bone about three inches in length, beginning from just above the trochanter major, cutting at once down upon the bone, separating the soft parts from it, then passed around the bone, between the greater and lesser trochanter, the chain saw and divided the bone. The section of bone thus separated from the shaft was seized with forceps and removed from the acetabulum. A small portion of the head of the bone remained in its socket and was removed with the scoop.

It was then ascertained that the acetabulum was more or less implicated in the disease. It was somewhat carious. Its surface was eroded and rendered the prognosis unfavorable.

The three inches of femur removed was eroded and carious.

The wound was left open and water dressings applied. Chloroform was used and its effect maintained by ether. To our great surprise this boy made a good recovery.

From the time of the operation until convalescence he enjoyed immunity from pain, became fleshy, and on October 1st, 1875, had obtained use of the limb and aided by crutches he could walk. He has a good hip joint, can rest his weight upon the limb, can move it at will in any direction. The shortening is one and a half inches.

A few days after the operation, and after subsidence of inflammatory action, extension was made and the boy put into wire breeches with the leg brought into the straight position.

HALLUX VALGUS.—Resection of half an inch of the head of the first metatarsal bone for abduction of the great toe is a recent operation; I have performed it twice at the Hospital during the past year.

I made use of Esmarch's bandage, made a single longitudinal incision over and of equal distance above and below the metatarso-phalangeal articulation, one inch and a half in length, and removed the head of the bone by the chain saw. When the bone is removed the phalangeal bone drops into line with the axis of the foot and the case needs no after treatment save the warm water fomentations.

The relief of the deformity is absolutely perfect. With the use of Esmarch's bandage not a drop of blood need be lost. Pressure upon the wound with a sponge or compress for a few minutes will prevent loss of blood from the returning current when the bandage is removed.

It will not be mal-apropo to remark in this connection that Esmarch's bandage is of the greatest service and indeed is indispensable in the search for pieces of broken needles that are embedded in the muscles of the hand or fore-arm. I have removed pieces of broken needles from the hand and wrist with the greatest facility with the help of Esmarch's bandage when it was found to be impossible without it to find the foreign body; when, indeed the embedded needles had eluded the search for more than a year of those who had made the attempt to find it; hence Esmarch's bandage lends to some of the minor operations of surgery as much interest as attaches sometimes to the more formidable operations.

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MISCELLANEOUS.

Against the Pendulum Movement in Working the Midwifery Forceps.

By J. MATTHEWS DUNCAN, M. D.

My object in writing this short paper is to contribute to the conclusive giving up of a bad practice. I have long publicly taught that the pendulum movement is useless and injurious; but that kind of publicity is not so wide as desirable. Others, of great authority, from their recognised science and experience, such as Litzmann of Kiel, have made objection to this manœuvre, but it is still extensively used and vigorously recommended. There is, indeed, a

natural tendency to resort to this swinging motion in the hands or minds of many practitioners, who probably have erroneous notions of what is called gomphosis, and think of drawing a nail out of a board. Besides, the movement is an element in that fussiness which recommends itself to many, if not the majority, of practitioners, and satisfies the admiring onlookers. The solemn arguments by which obstetric authors support its use I shall presently discuss.

My objection does not extend to changes in the direction of traction by the forceps, such as may be required according as the dragged head descends, or such as may be called for when the head has been previously inefficiently dragged in a wrong direction. It is to the changes implied in the oscillatory or leverage or pendulum-like movement of the dragging instrument that my objections are raised. These movements I regard as not merely useless, but as also injurious. They have been considered as lending to economy of force; but this is the opposite to the truth, as I shall hereinafter show. I mention this imagined advantage now in order to say that, were it true only so far as the practitioner is concerned, I would esteem such economy as of no value, for the accoucheur is present with a practically boundless supply of force, which he is willing to lavish for behoof of his patient.

In the following remarks I shall make reference only to that pendulum movement from side to side, which alone is, so far as I know recommended in these latter times. The pendulum movement in a sagittal direction, as recommended by the early describers of the forceps operation, is still more open to objections than the former.

In describing or defending the pendulum movement, two great points are made: first, that it is analogous to, or identical with, that of a lever and double rack; and, secondly, that by resorting to it there is an economy of force.

The lever and double rack hypothesis may be considered first. It is difficult to dispose of it only because it is so flimsy that it is impossible to get hold of it. There is no toothed rack on the wall of the pelvis. There is no roughness to take the place of a toothed rack. Were there any such teeth or roughness, the worst use that could be made of them would be to make them assume the function of a rack. The accoucheur should strive to advance the head as smoothly and with as little impression as possible on the walls of the pelvis. Further, there are no teeth or roughness on the fetal head to fit into the teeth of the supposed rack.

Without the lever and double rack hypothesis substantiated, the movement must be useless; for it is, and must be, done to no purpose. It is conceivable that the head may be sized with such a degree of firmness by the blades of the forceps as to be moved or made to revolve as on a pivot; but such movement, without the additional force required in simple and successful traction, uncomplicated by the movement, would be of no avail. It would not ad-

vance the head. Without the lever and double rack, it would only cause revolutions as on a pivot—it would not produce progress.

Let us imagine that the accoucheur, dragging to one side, produces advance of the opposite side, which he maintains by continued dragging, while he makes the oscillatory movement in order to drag to the other side. In this way he may make the head advance while using an oscillatory movement. Every one knows that this is easily done. But then every one must also recognise the utter inutility of the movement. It is the imitation of the action of a lever and double rack without a trace of its utility. An unnecessary movement like this has great disadvantages. The pressure exerted, and the traction force used, are probably greater, certainly not less, than if simple traction were exerted to produce the desired result. Pulling the head down at one side and then at the other, and so advancing, is merely an injuriously complicated way of producing simple progress. It produces no evasion nor diminution of the difficulty to be overcome, while it has concomitant and avoidable evils.

In answer to this reasoning one might refer to an analogy in the way in which a cork is sometimes extracted from a bottle without using a corkscrew. But a study of this analogy only confirms the argument. For the cork would be better, and on the whole easier, extracted by simple uncomplicated traction as by a corkscrew. Besides, the cork and the bottle mutually exert such friction force as prevents retraction of one side if advanced, just as if the bottle were a rack and the cork the lever; and such is in no sense the case with the fetal head and pelvis. Lastly, this oscillatory advance of the cork is only sought when the power fails to produce a direct advance, and, in the case of the forceps, there is never deficiency of power; for as we have already said, the power applicable by the accoucheur is practically boundless, or, in more sober terms, it is greater than he can safely apply.

The idea that there is any saving of force, so far as pressure on the mother's and child's parts are concerned, by resort to the oscillatory or pendulum movement, is such that I cannot argue against it. The question involved is purely mechanical and of extreme simplicity. It is this: a mechanical difficulty in bringing a child's head through a resisting passage has to be overcome; further, the difficulty is not to be evaded by changing the position of the child's head; on the contrary, that position may be supposed to be the most favourable for facility of propulsion. Now, can any oscillation or other imaginable movement diminish the mutual, and, in this case, injurious pressure or force required to produce advance? The question requires no answer. The supposition is absurd. Moreover, the absurdity is not less, whatever phrase may be given to the hypothetical advantages of the pendulum movement. A certain amount of work has to be done; the head has to be advanced against resistance that must be overpowered if the effort is unsuc-

cessful. Direct uncomplicated traction does the work in the simplest way, and no complication of it by pendulum movement or other can diminish the amount of work expended below that required by simple traction. The complication of simple traction may, however, increase the expenditure of force to a great extent.

The pendulum movement necessarily involves an injurious amount of pressure and consequent friction, in all cases, between the parts of the head to which the blades of the forceps are applied and the adjacent maternal structures. No doubt this friction is in most cases so slight and temporary as to be of little moment. But in some cases, when the resistance to progress arises from tight and undilatable soft parts, it may be very injurious. The most important forceps cases, however, are those where the obstacle to progress arises from hard parts; and, of these cases, the most frequent and characteristic are those of simple narrow or flat pelvis. In such cases the head has to be slowly dragged and perhaps moulded between the promontory of the sacrum and the pubic bones. Now here the pendulum movement involves special evils and dangers; for by it there is necessarily produced, besides the trivial friction, which is most extensive at the points where the blades are applied, a violent and powerful squeezing of the soft parts between the head and the opposing pelvic bones, on which the head works. This combination of wriggling and squeezing is altogether unnecessary, and must greatly aggravate the necessary or unavoidable mutual pressure, which is bad enough.

If for the carrying out of the plan of pendulum movement the forceps is made to compress the head so strongly as not to slip on it, which mode is probably regarded as desirable, then the points of the forceps, and especially the point of that blade which is on the side of the head towards which the movement is given, will exert a specially powerful, and certainly undesirable, amount of pressure on the parts of the child's head or face which they touch. If, on the other hand, the blades do not press the head with such firmness as to obviate a to-and-fro motion of them on the head, then the scalp will be liable to be much injured, and its surface abraded; conditions which are often observed as the result of this kind of proceeding.

There is in the mechanism of delivery, whether natural or morbid, nothing analogous to this artificially proceeded oscillating or pendulum motion. Nature pushes a fetal head through an obstructing passage by force, which produces, or may produce, on the one hand, dilatation or laceration of the passage; and, on the other hand, various kinds of changes in the shape and size of the fetal head. Our best guide in forceps cases is the process of nature; and it is probable that any future improvements in the working of the instrument will be the consequence of closer and successful investigation of the mechanism of labour in these difficult cases. The pendulum movement, in working the forceps, does not advance

tageously increase the power of the instrument to produce desired results.

The use of the forceps is to contribute, by artificial pulling, to the strength of the natural expulsive efforts which push. To this traction, judiciously applied, the practitioner should confine himself. The oscillatory movement will contribute nothing to the forward traction, and it is forward traction which alone is desirable.

In corroboration of these theoretical views as to the injuriousness and inutility of the pendulum movement in the working of the midwifery forceps, I might appeal to the extensive experience of myself and of many other practitioners. But such appeal can only be held as evidence sufficient to show that the pendulum movement is not necessary. It affords no evidence that using it or abstaining from it is the preferable plan. And I cannot imagine any method available at present whereby the results of experience can be made suitable for the final settlement of the matter.

Both plans are used by good practitioners. Traction without oscillation is simple, effective, and in accordance with the method of nature's own efforts. Traction with oscillation is complicated; and many theoretical and practical objections may be made to it.

Other objections might be adduced against the pendulum movement, and some are candidly stated by authors who recommend its adoption. I have confined myself to the discussion of its supposed utility and inevitable evils. The only advantage which I can conceive it to possess, is one to which no one will avow his indebtedness, for it would be an admission of culpable want of knowledge, and consequent unjustifiable practice. A practitioner ignorant as to the proper direction of pulling may, by this motion of the forceps while extracting, fall accidentally upon the right direction, and thus do some good by mere luck, and at much risk, which should have been done intelligently, and without avoidable risk. It is, perhaps, in order to insure this kind of possible success, that same authors recommend the movement to be not pendulum-like, but rotatory, or in the grand so-called tours."

Obstet. Journ. Gt. Britain and Ireland.

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Effects Produced upon the Blood of Syphilitic Patients by Treatment with Mercury.

A paper upon the above subject was read at the meeting of the New York County Medical Society by Dr. E. L. Keyes. The following summary is taken from the *Record*. The paper may be found in full in the January number of the *American Journal of Medical Sciences*:

With regard to the value of mercury in the treatment of syphilis,

Dr. Keyes assumes the following position: that syphilis is most surely controlled and most often cured by the unremitting use of small doses of mercury, just enough to restrain the symptoms without producing any conscious physiological effects, and continued for not less than two years. The drug may be pushed if symptoms seem to demand it, is often continued more than two years, and may be assisted by iodide of potassium. The opinion was expressed, that when a syphilitic patient in fair health is treated in this manner from the period of his first eruption, he may be so cured that he will have but one general eruption, and no serious lesion subsequently; that the health of such a person will be as good after as before such treatment, and that the exceptions to the rule are not numerous. At this point reference was made to the statement of Liègeois, namely, that small doses of corrosive sublimate increase the weight of healthy men or animals. This statement has been sustained by the clinical observation of Dr. Keyes.

Reference was also made to the results obtained by Ricord and Grassi in the examination of the blood of syphilitic patients while they were being treated with mercury. The clinical experience of Dr. Keyes had seemed to contradict the result obtained by observers. Wilbouchewitch, in an article published in 1874, gave us his conclusions with regard to the effects produced upon the blood in the early days of syphilis by treatment with mercury. But Dr. Keyes was of the opinion that this observer had formulated his treatment for syphilis upon an erroneous interpretation of facts, and proceeded to show how his conclusions were worthless. Again, reference was made to the report of Dr. J. Hughes Bennett, in which the fact was stated, although no note made of it, that dogs increased in weight while taking small doses of mercury. In the light of the observations made by the gentlemen mentioned, Dr. Keyes began a series of experiments which extended over a period of six months, and were made upon persons in health, hospital patients, and patients in private practice. The blood was taken from twenty-seven individuals, of which six were apparently sound and twenty were syphilitic. Only three hospital cases were used, and in them the count was made chiefly for comparison. The blood was counted 101 times, and from five to ten counts made each time. The instrument used is called a *Hématimete*. All the methods of actually counting the blood cells, to which reference has been made by writers upon this subject, whether for red or white cells, have had the defect of not accurately establishing the count for a given volume of blood. The first recorded instance where accuracy was aimed at was reported by Cramer, but his process was a rough one. Reference was made to the instruments which had been used, and a description of the instrument employed in his own observations. The fluid used to dilute the blood for counting was made as follows: Take urine,

neutral, slightly phosphatic, about 1020 sp. gr., and make of it a saturated solution with borax. Filter, and there is left a fluid with sp. gr. about 1030, which is to be diluted with water until reduced to sp. gr. 1020. The following was regarded as a better fluid, but the corrosive sublimate may render it objectionable: Take of urine, neutral or slightly alkaline, sp. gr. 1020, filter, and add gr. v. of corrosive sublimate to the ounce, subsequently decant, and reduce with water to sp. g. 1020.

In the labor of the experiments Dr. Keyes was assisted by Dr. A. L. Stimson, and observations relating to the following points were noted :

1. *Average of red blood-corpuscles in 1 cubic mm. of blood of the healthy adult male.*—A high average is 5 millions. Anæmia rarely goes below 3 millions, and in five instances the count reached above 6 millions.

2. *Effect of small doses of mercury upon the blood early in syphilis.*—In all the cases counted, the number of red blood-corpuscles increased under the influence of mercury, good hygiene and tonics.

3. *Effect of the long-continued use of small doses of mercury upon the blood in syphilis.*—There were three cases; the drug was administered respectively, eleven, six and eighteen months; the blood-count was above the healthy average, and clinically they were all in excellent health.

4. *Effect of mercury in excess upon the blood in syphilis.*—In this, the only case in which salivation had been present (produced for special reasons), the count showed a loss of one million, which was attributed to the excessive use of mercury.

5. *Effect of mercury combined with iodides upon the blood in syphilis.*—In this list it would be fair to expect frequent exceptions to the rule, that mercury increases the number of red corpuscles in the blood of syphilitic patients, because so many who need prolonged treatment late in the disease become more or less cachectic and depreciated in general health, but in only two out of the nine cases under this head did the average count fall below the normal standard, and this among patients who had had syphilis for a long time.

6. *Effect of mercury upon the blood in syphilis in hospital cases.*—There were three cases. One entered salivated, and his count increased after he began to eat. One showed a wretched count, was debilitated by disease and hospitalism, but improved under the influence of good hygiene and tonics, and it was believed that mercury also helped him.

7. *Effect of small doses of mercury upon the blood of individuals not syphilitic.*—The observations showed an increase in the count. In testing the effect of small doses of mercury, Dr. Keyes used the protiodide in granules, gr. 1-5 each (the preparation more commonly employed by him in the treatment of syphilis); and, as

every persons capacity for the drug varies, one grannle was administered after each meal, and increased by one granule each day (not dose) on every fourth day, until some evidence of irritation was developed, when the dose was at once reduced to one-half, and there continued at the option of the doctor. The conclusions arrived at have in the main been given. The following may be added to make the report more complete:

1. Mercury decreases the number of the red cells when given in excess, especially in hospital cases.

2. Syphilis diminishes the number of red cells below the healthy standard.

3. Mercury in small doses continued for a short or long period in syphilis, given alone or with iodide of potassium, increases the number of red blood-corpuscles, and maintains a high standard of the same.

4. Mercury in small doses acts as a tonic upon healthy animals, increasing their weight. In larger doses it is debilitating or fatal.

5. Mercury in small doses is a tonic (for a time, at least) for individuals in fair health, not syphilitic. In such individuals it increases the number of the red blood-corpuscles.

The paper being open for discussion, Dr. Bumstead remarked that he regarded the results reported by Dr. Keyes as being of very great importance, and complimented the zeal with which the work had be pursued. The only criticism which he would venture was, whether the effect produced by mercury upon a healthy individual can be taken as a standard of the effect which will be produced by mercury upon an individual suffering from syphilis.

With reference to the results which follow a long-continued use of mercury in the treatment of syphilis, his experience had differed from that of Dr. Keyes.

Formerly he had treated syphilis according to the plan of administering mercurials for six months, perhaps a year, and following with iodide of potassium, which was to be continued for two or three months. The results obtained by this plan of treatment had, in his hands, proved very unsatisfactory.

Latterly, the plan of treatment which he has more frequently adopted consist in the vigorous use of mercurials for limited periods of time, and then the allowance of an interval, during which no remedy, except it may be a simple tonic, is taken. After a certain length of time, variable somewhat in different cases, a return is made to the mercury, when it is again pushed with considerable vigor. Dr. Bumstead preferred this course to the prolonged use of mercurial in small doses, as recommended by Dr. Keyes, and also by Jonathan Hutchinson, of London. With regard to the excessive use of mercury in the treatment of syphilis, such cases are rarely seen at the present time.

Alterations of Sensibility in Articular Rheumatism, and the Electro-Therapeutical Treatment of the Disease.

Dr. Drosdoff has called attention to a very remarkable reduction of sensibility to the action of the electric current that he observed in a case of acute articular rheumatism, though both the pain in movement and when pressure was made were very considerable, from which he concludes that there are separate channels for the conduction of different kinds of stimuli, and that the perception of various kinds of sensation should be more carefully investigated in other cases. For faradisation he recommends the use of Dubois Reymond's apparatus with Grove's elements. The feeling of space he tests by means of Weber's circle method, and the perception of pressure by Wright's plan. The sensation of temperature may be tested by means of metal plates dipped in water at different temperatures. In the case he records, the application of very severe shocks of electricity was not perceived, though lively pain was experienced on the slightest pressure. It was curious to observe that the special diminution of perceptivity was strictly limited to the parts affected with the disease—just beyond these parts the sensibility was as acute as elsewhere. The reduction of sensibility for electric excitation begins, he thinks, earlier, and remains longer than the pains in the joints, and there is no prospect of permanent recovery as long as the electro-cutaneous excitability has not returned to its normal amount. Dr. Drosdoff observed, that coincidently with the diminution of the electro-cutaneous sensibility, the faculty of perceiving pressure was exalted. The tactile sensibility is augmented in acuteness, but also in many cases undergoes abnormal variations. The increased thermic and tactile sensibility is diminished after from five to ten minutes' persistent faradisation. The cutaneous temperature over the affected joints is constantly two or three degrees Centigrade higher than in the parts in the vicinity. This exaltation of temperature, as a rule, precedes rheumatic pains, and lasts after they have departed. It also is reduced by faradisation applied for a few minutes, and the reduction lasts for several hours. The application of faradisation does protect the patient from a relapse, but it materially shortens the duration of an attack and renders it much milder. Drosdoff consequently strongly recommends that it should be employed as one of the means in the treatment of acute articular rheumatism.—(*Botkin's Klinik zu St. Petersburg und Rundschau*, Oct. and Nov., 1875.

Editorial.

INTERNATIONAL MEDICAL CONGRESS, PHILADELPHIA, 1876.

SEPTEMBER 4TH 9TH.

We make the following extracts from the Preliminary Programme issued by the Commission :

The International Medical Congress will be formally opened at noon, on Monday, the 4th day of September, 1876, in the University of Pennsylvania.

The following addresses will be delivered before the Congress in general meeting.

Address on Medicine, by Austin Flint, M. D., Professor of Practice of Medicine in Bellevue Hospital Medical College, New York.

Address on Hygiene and Preventive Medicine, by Henry I. Bowditch, M. D., President of State Board of Health of Massachusetts.

Address on Surgery, by Paul F. Eve, M. D., Professor of Operative and Clinical Surgery in the University of Nashville.

Address on Obstetrics, by Theophilus Parvin, M. D., Professor of Obstetrics in the College of Physicians and Surgeons of Indiana.

Address on Medical Chemistry and Toxicology, by Theodore G. Wormley, M. D., Professor of Chemistry in Starling Medical College, Columbus, Ohio.

Address on Medical Biography, by J. M. Toner, M. D., of Washington, D. C.

Address, by Dr. Hermann Lebert, Professor of Clinical Medicine in the University of Breslau.

Address on Medical Education and Medical Institutions, by Nathan S. Davis, M. D., Professor of Principles and Practice of Medicine in Chicago Medical College.

Address on Medical Literature, by Lunsford P. Yandell, M. D., late Professor of Physiology in the University of Louisville.

Address on Mental Hygiene, by John P. Gray, M. D., Superintendent and Physician to the New York State Lunatic Asylum, Utica, New York.

Address on Medical Jurisprudence, by Stanford E. Chaille, M. D., Professor of Physiology and Pathological Anatomy in the University of Louisiana.

The Congress will be divided into the following sections in which discussions upon various scientific subjects will be held :

I. Medicine. II. Biology. III. Surgery. IV. Dermatology and Syphilology. V. Obstetrics. VI. Ophthalmology. VII. Otology, VIII. Sanitary Science. IX. Mental Diseases.

The gentlemen who have been named to open the discussions in these various sections are all well known and will present papers which will be worthy of the consideration of the Congress. As the programme published is but a preliminary one, the Commission request gentlemen intending to make communications upon scientific subjects or to participate in any of the debates, to notify them before the first of August that place may be assigned them on the programme.

In order to facilitate debate there will be published on or about June 1st the outlines of the opening remarks by the several reporters. Copies may be obtained on application to the Corresponding Secretaries.

The volume of Transactions will be published as soon as practicable after the adjournment of the Congress.

The Public Dinner of the Congress will be given on Thursday, September 7th, at 6.30 P. M.

The registration book will be open daily from Thursday, Aug. 31, from 12 to 3, P. M., in the Hall of the College of Physicians, N. E. corner 13th and Locust Streets. Credentails must in every case be presented.

The registration fee (which will not be required from foreign members) has been fixed at Ten Dollars, and will entitle the member to a copy of the Transactions of the Congress.

Gentlemen attending the Congress can have their correspondence directed to the care of the College of Physicians of Philadelphia, N. E. corner of Locust and Thirteenth Sts., Philadelphia, Pennsylvania.

There is every reason to believe that there will be ample hotel accommodation at reasonable rates, for all strangers visiting Philadelphia in 1876. Further information may be obtained by addressing the Corresponding Secretaries.

All communications must be addressed to the appropriate Secretaries at Philadelphia.

S. D. GROSS, M. D.,
President.

WILLIAM B. ATKINSON, M. D., 1400 Pine Street, Recording Secretary.

WILLIAM GOODELL, M. D., 20th and Hamilton Sts.,

DANIEL G. BRINTON, M. D., 115 S. 7th Street,

American Corresponding Secretaries.

RICHARD J. DUNGLISON, M. D., 814 N. 16th Street.

R. M. BERTOLET, M. D., 113 S. Broad Street.

Foreign Corresponding Secretaries.

Philadelphia, March, 1876.

Meeting of the American Medical Association.

The Twenty-seventh Annual Session of the American Medical Association will be held in the city of Philadelphia, Pa., on Tuesday, June 6, 1876, at 11 A. M.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by representation in their respective State Societies, and from the Medical Department of the Army and Navy of the United States."

"Each State, County, and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number; Provided, however, that the number of delegates for any particular State, territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of Medical Societies as above designated are earnestly requested to forward at once, lists of their delegates to the Secretary, Dr. Atkinson, in order that the Committee of Arrangements may be able to form some idea of the number likely to be present.

The following Committees are expected to report:—

On Mechanism of Accommodating the Eye, Dr. D. S. Reynolds, Ky., Chairman. On New Remedies, Dr. Austin Flint, Jr., N. Y. Chairman. On the Medical and Surgical Uses of the Aspirator, Dr. E. S. Gaillard, Ky., Chairman. On Influence of Climate on Pulmonary Diseases in Minnesota, Dr. Franklin Staples, Minn., Chairman. On the same in Florida, Dr. E. T. Sabal, Fla., Chairman. On Proper Legislation to Prevent the Spread of Syphilis, Dr. Samuel D. Gross, Pa., Chairman. On Prize Essays, Dr. Samuel D. Gross, Pa., Chairman. On Neurology, Dr. S. C. Chew, Md., Chairman. On Rank of Medical Corps of the Army, Dr. H. A. Johnson, Ill., Chairman.

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We have received the following communication, to which we would call the attention of medical students residing in the city and near vicinity, advising them to take advantage of the offer so kindly extended to them:

DEAR DOCTOR:

Be so kind as to state in the JOURNAL that I shall have Surgical Clinics every Saturday, at 11 o'clock A. M., at the General Hospital, during my term of service, to which all students of Medicine are invited.

Very truly yours,

CHAS. C. F. GAY.

DISCOURAGING. To the mass of medical graduates, the following from the introductory address of Mr. Davy, at the Westminster Hospital, will not be a very encouraging prospect: "In conclusion, let me firmly assure you that your early prospects in life are most disheartening; your toil and ambition may be equally great, but your pay and dignity will be equally small; you have to deal

with an ignorant and proud people, and I advise every one to resign at once any and every thought of becoming a medical man unless he possesses three qualifications: 1. Independence; 2. An aptitude for and a love of the profession; 3. The readiness to pay a heavy premium in this world for his reward in the next.

—ROMANCE IN MEDICINE. Prof. Billroth, in his recent book on Medical Education, which has attracted so much attention, indulges in some severe strictures upon the Jewish students in Vienna. The point which he urges the most forcibly, and, in fact, the strongest one, is their lack of early education; but a point which he makes, that they are unfit for the study of medicine because devoid of *romance*, will cause a smile among practical, every-day American physicians.

—SCIENCE AND POETRY. The Philadelphia *Ledger*, which, by the way, is unequalled for its poetical obituaries, indulges in the following explanation of a case of Perityphilitis and its result:

A cherry, incompletely ripe,
His little business did for him.
And now, serenely free from gripe,
He is a bob-tailed cherubim.

—LOOKING DOWN ON HIS NEIGHBORS. Prof. Bartholow, of the Medical College of Ohio, in which Cincinnati is situated, or rather, which is situated in Cincinnati, after indulging in considerable glorification over the success of the Ohio Medical College, the six thousand patients who are treated annually at the Dispensary for the benefit of the students, but to the sorrow of the younger physicians whom the majority of these six though could and would pay were they not treated free at the Dispensary; the large number students in attendance, etc., etc., calls Dr. Wood, of the Philadelphia *Medical Times*, the terrible name of medical iconoclast, and winds up by deploring the fact that there are so many medical schools, being particularly severe on those in the *villages* of Louisville, Columbus, Cleveland, Indianapolis and Evansville. Dr. Wood must feel severely the epithet of "iconoclast," but who can imagine the feelings of the inhabitants of the above-named places when they learn that what they fondly imagined to be cities of a respectable size are mere villages?—OMISSION. In our list of the prizes awarded at the last Commencement of the Buffalo Medical College, we accidentally omitted to state that a prize of \$50 was awarded to E. A. Adams, A. B., by Prof. Mason, for the best examination in Physiology; and one of \$25, to C. R. Dryer, for the next best examination.—MISTAKEN IDENTITY. Some time since an article appeared in the *Lancet*, censuring the French Medical press for their blunders in the use of English proper names, citing as an instance an obituary of Huebbenet, which the *Lancet* inferred was meant for Hughes Bennett. The *Gazette Hebdomadaire* replies to the *Lancet*, and points out the fact which that journal had failed to notice, that Huebbenet was a Russian, and that the obituary was in no way applicable to Hughes Bennett.—DR. ANSTIE. The *Practitioner* for January contains a sketch of the life, together with a portrait, of the late Dr. Austie. Dr. T. Lander Brunton succeeds Dr. Austie as Editor of the *Practitioner*.

In Memoriam.

At a meeting of the Board of Curators of the Medical Department of the University of Buffalo, held at the College Monday evening, Feb. 21, the following resolutions were prepared by the Committee named, and adopted as the sense of the Board :

Whereas, In the Providence of God our esteemed friend and fellow-citizen, Dr. Milton E. Potter, of Attica, N. Y., in the fulness of years and after a useful and laborious life, has passed away since our last meeting ; and

Whereas, In his death we lose not only a worthy and honored member of our profession, but also a tried and trusty friend of the Buffalo Medical College, an active Curator, and a cultivated man ; therefore

Resolved, That in his death we recognize the hand of a wise, overruling Providence governing the lives and affairs of men in ways inscrutable to us.

Resolved, That in Dr. Milton E. Potter we recognized a representative physician, a man full of labors and good works, whose busy life has been so fully spent for others in the labors of his profession as to merit richly the words, "Well done, thou good and faithful servant."

Resolved, That in the death of Dr. Potter we lose one of our most esteemed fellows, and the Buffalo Medical College one of its most active and trusted friends.

Resolved, That a copy of these resolutions be presented for publication to the Buffalo papers, the Buffalo MEDICAL AND SURGICAL JOURNAL, and a copy duly signed be sent to the family in token of our appreciation of the deceased.

THOS. D. STRONG, M. D.,

C. H. RICHMOND, M. D.,

H. D. VOSBURGH, M. D.,

Committee of Curators.

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Books Reviewed.

The Medical Jurisprudence of Insanity. By J. H. BALFOUR BROWNE, Esq. Second Edition. With references to the Scotch and American Decisions. Philadelphia: Lindsay & Blakiston. 1876. Buffalo: T. Butler & Son.

There are few topics in medicine or jurisprudence which are more important than those connected with insanity. The responsibility of the insane for acts of crime, is a question which has attracted much attention from the professions of law and medicine, and received more notice from the secular press than any other. Scarcely is a crime of any great magnitude committed, especially if it is particularly atrocious in its details, before there are numerous persons who set up the plea of insanity in behalf of the supposed criminal.

The author of the work under consideration has had unusual facilities, for a non-professional man of observing the insane in the hospitals of Great Britain, and his work, therefore, will be found to be remarkably in accordance with the opinions entertained by medical men.

The author recognizes several of those forms of insanity which have been the subject of doubt by some and of ridicule by others, among which are dipsomania, homicidal and suicidal mania, pyromania, kleptomania and erotomania.

The capacity of the insane is well discussed in the relation of making wills, executing contracts, etc.

The work is an interesting one, and the cases quoted and the decisions cited are instructive illustrations of the points taken by the author.

The publishers have presented the work in a very attractive and convenient form. We predict that it will find in its present form increased favor both in the professions of medicine and law.

Phthisis: Its Morbid Anatomy, Etiology, Symptomatic Events, etc.

By AUSTIN FLINT, M. D. Philadelphia: Henry C. Lea. Buffalo: T. Butler & Son.

This volume is the result of observations in six hundred and seventy cases of Phthisis. The author has in this work, as in his previous productions, made use of his own large experience in the treatment of disease; and hence, what he has to say upon phthisis is the result of conclusions carefully drawn from cases accurately observed. In reference to the morbid anatomy and etiology of phthisis, Dr. Flint gives no new facts. He does not agree with the opinion that it is of inflammatory origin, and in the chapter upon treatment expresses the fear that this view of the disease will lead to the old antiphlogistic methods of treatment. Following the sections upon morbid anatomy and etiology are those upon symptomatic events and complications, fatality and prognosis, treatment, physical signs and diagnosis. In these sections Dr. Flint does not express any views essentially differing from what he has already put upon record.

The chapter upon treatment will be, perhaps, the one to which physicians will turn with the greater interest. He does not consider his experience with the use of arsenic, the hypophosphites, or the pancreatic emulsion of Dr. Dobell, of sufficient extent to form the basis of any conclusions. The author does not think the explanation of the increased number of recoveries over former years can with any correctness be attributed to the employment of cod-liver oil. He is rather inclined to attribute the number of arrested cases to the enlightened views now held concerning alimentation and hygienic treatment, together with a more sparing employment of antiphlogistic measures. Cod-liver oil he regards as a nutriment rather than a drug. Dr. Flint regards alcoholics as signally useful in a certain number of cases, these cases being those in which they can be taken

largely without alcoholic excitation or any immediate unpleasant effects. In speaking of the danger of patients becoming addicted to the use of alcoholic stimulants, Dr Flint says that he does not know of a single instance of this nature ; that as a rule patients are glad to discontinue their use when told to do so by their physician. On the subject of physicians being instrumental in making drunkards, he speaks plainly. We quote as follows : " Let me add that I would not be understood to sanction a possible inference that, inasmuch as alcoholics are useful in certain cases in the treatment of phthisis, their use is to be advised by way of prophylaxis, for any who may fancy or affect to fancy themselves in danger of this disease. * * * I do not doubt that the medical profession sometimes receives undeserved censure, because some of those who become addicted to the use of alcoholics, find it convenient to resort, for an excuse, to the falsehood that they were taken under the advice of a physician."

Dr. Flint makes some valuable suggestions concerning the value of the change of climate in the treatment of phthisis. We have not the space to quote some portions of his remarks upon climate to which we would like to refer. We can simply say that what he says upon the subject seems eminently well weighed and judicious.

The work shows a large amount of patient labor and comparison of cases, and while it presents no new facts, will amply repay a careful study.

A System of Midwifery, Including the Diseases of Pregnancy and the Puerperal State. By WILLIAM LEISHMAN, M. D. Second American from the Second Revised English Edition. With Additions by JOHN S. PARRY, M. D. Philadelphia : Henry C. Lea. 1875. Buffalo : T. Butler & Son.

The first edition of this work having become exhausted both in England and the United States, the author has prepared a second, which he has carefully revised and corrected. The writer has given greater prominence to the physiological questions involved in the study of midwifery than in the first edition. The chapters on puerperal fever have been re-written to give prominence to the theory of septicæmia, which he has adopted since the last edition.

The chapters upon the forceps in the former edition were not in accord with the more generally accepted views of American physicians, and hence the American editor, Dr. Parry, has added much to this section of the work. This portion as it now stands, is a very acceptable exposition of the subject. Lactation and the puerperal diseases have also received attention from Dr. Parry, who has added to the work a chapter on Diphtheria of Puerperal Wounds, together with some new illustrations. The work of the American editor is exceedingly well done, and is an addition of great value to the work.

As we write the above, news comes to us of the death of Dr. Parry, in Jacksonville, Florida, in his thirty-fourth year. Dr. Parry had spent two previous winters in Florida for the benefit of his health. In order to prepare the work under consideration, and his own monograph upon Extra-uterine Pregnancy, for the press, he remained in Philadelphia until December. We do not know that such is the fact, but surmise that the task was too great for one in his condition of health, and he only hastened his death by his devotion to work.

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Books and Pamphlets Received.

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A Manual of General Pathology, for the Use of Students and Practitioners of Medicine. By Ernst Wagner, M. D., Leipzig. Translated from the Sixth German Edition by John Van Degen, A. M., M. D., and E. C. Seguin, M. D. New York: Wm. Wood & Co. 1876. Buffalo: H. H. Otis.

Medical Thermometry and Human Temperature. By E. Seguin, M. D. New York: Wm. Wood & Co. Buffalo: H. H. Otis.

Transactions of the Thirtieth Annual meeting of the Ohio State Medical Society, held at Put-in-bay, June, 1875.

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ART. I.—*Clinical Conversations on Diseases of the Skin.** By
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Reported by Robert Campbell, M. D., Clinical Assistant.

The first case, gentlemen, to which I wish to call your attention is one which, although you will not often be called upon to treat it, is important from two points of view, first, from its comparatively harmless nature as compared with syphilis, for which it might easily be mistaken, and second, in regard to its prophylaxis because of its tendency to recur.

CASE I.—ERYTHEMA PAPULATUM.—Ellen Murphy, an apparently healthy servant girl of 22 years, has twice previously had attacks of the same disease here exhibited, at intervals of nearly or about one year, that is, two years and one year ago respectively ; in the intervals she has enjoyed good health. The present attack commenced four days ago, the back of the hands and wrists being first affected and the eruption appearing on the dorsum of the feet on the following day. You now see on the backs of the hands and extending up on to the arms an eruption consisting of isolated and distinct spots of a rather pinkish violet color, varying in size from that of a small pin-head to half an inch in diameter,

*Cases shown and remarks made at the Demilt Dispensary, New York.

mostly circular, slightly elevated both to the sight and touch, and ending abruptly in healthy skin, that is, there is no shading off of the disease into healthy tissue. When I press upon these individual efflorescences they are found to pale entirely, but on suddenly removing the finger the color quickly returns, and, moreover, you can appreciate by the touch that the spots do not entirely disappear under the pressure, but that there is some element there which offers slight resistance. The surface of these blotches are smooth and slightly shining, with no trace of any desquamation. Both hands and both fore-arms present much the same appearance, the eruption being much more scattered on the latter, and the feet are similarly affected, but she tells us that the disease exists nowhere else except on the face, where it is plainly seen. Here the eruption presents somewhat different features; on the right side of the face, especially below the eyes, are several patches of erythema of different sizes and shapes, and here, below the ramus of the jaw are two patches which are longer than broad, and none of them are as red as those on the hands, nor so clearly defined; but pressure causes the redness entirely to disappear and they are but another phase of the same disease, which here, from the raised borders might be termed *erythema marginatum*. The entire eruption causes her but little annoyance save the unsightly appearance, for you know that almost every one is very sensitive about any spot or blemish on the skin, far more so, it is sad to say, than the same persons often are about the like affecting their character.

In regard to the family history of this patient, she tells us that there have been no eruptions in the family, (it is difficult to get this class of patients to acknowledge that there ever is), her father had lumbago, her mother sciatica and was asthmatic, but there is no history of rheumatism in the family, nor in this patient. Her general health is good, the bowels are constipated.

Those of you unacquainted with the more recent views may be surprised at my associating the term *papulatum* with *erythema*, inasmuch as a leading feature of erythematous eruptions or blushes, as they are often spoken of, is simply the *congestion*, as distinguished from eruptions attended with *exudation* on the sur-

face or with thickening of the skin. But Hebra has ranked several species of eruptions together under the name *erythema exudativum multiforme*, and one of these in this papular form here exhibited, which he has very clearly described. This writer makes other forms of erythema to be but developments of this, which may go on even to the production of vesicles, and you will doubtless have an opportunity ere long of seeing here some cases where the congestive process has proceeded even to the effusion of so much fluid that the epidermis has become raised in blisters or small bullæ.

As I remarked at first, it is well to know and recognize these simple eruptions of the skin perfectly, for it would be a serious error to attribute this lesion to syphilis, whose large papular form this on the hands and arms resembles not a little. The differential diagnostic marks are, (besides of course the absence of history of the disease), the lighter color of the eruption; its involvement only of the hands and feet, whereas a syphilitic eruption of this intensity would certainly affect the body as well; the more plainly erythematous character of the eruption on the face, which could never be mistaken for a syphilide; and finally, the recurrence of the eruption at stated intervals and seasons of the year, in which this class of affections is known to appear—I know of no other eruption with which it could be confounded.

The last points to be considered are the simplest and yet the most important, namely the prognosis and therapeutics of the disease. It is self-limited and if left to itself will certainly disappear, according to Hebra, in from one to four weeks; it cannot in any way endanger life or health. Its duration, however, may be shortened, I believe, very considerably by treatment, and that which I usually advise is the magnesia and iron mixture which you hear me order as Startin's, although I am not sure that the formula is just like his. She will receive, $\mathcal{R}$ *Magnesiae Sulphatis* $\mathfrak{z}$ i, *Ferri Sulph.* $\mathfrak{z}$ i, *Acid. Sulph. arom.* $\mathfrak{z}$ ss, *Tinct. Gent.* $\mathfrak{z}$ i, *Aduæ font. ad* $\mathfrak{z}$ iv.; *M. Sig.* Teaspoonful after meals, in water. Locally nothing is required, though in private practice it would be well to order a cooling lotion such as the following: $\mathcal{R}$ *Pulv. Calaminæ prep.* $\mathfrak{z}$ i, *Zinci oxidi* $\mathfrak{z}$ i, *Glycerini* $\mathfrak{z}$ ii, *Aquæ Flor. Aurant* $\mathfrak{z}$ iv.; *M.* which will have the effect also of covering up the blotches by

the thin coating of flesh-colored powder which it leaves on the surface; it is of course to be well shaken before being applied.

In regard to prophylaxis against future attacks I have not much to advise, though I think that if next autumn she were to guard the health assiduously, paying particular attention to keeping the bowels relaxed and to use continuously some of the alkaline waters, together with keeping the skin in an active, healthy condition by baths, perhaps alkaline, with friction, she would be very likely to escape another attack; otherwise she may expect one.

The next case is one which it will be well to examine closely, because it demonstrates clearly the clinical differences between lichenoid eczema and the *tinea circinata* or ring worm of the body, which latter I thought this eruption to be when we first exposed a portion of the arm.

CASE II. *Eczema lichenoides resembling tinea circinata*.--This little boy, three years and a half old, comes to us for an eruption over the deltoid muscle of the left arm, extending from near the shoulder for a distance of about two inches down the arm. It is quite regularly oval in shape and of a dusky red color, composed of papules as you see on close examination, with the tops scratched off, so that the surface is rough, and, on pinching up the skin it is found to be considerably thickened. Inquiring, as you always hear me do, if this is all the eruption and if the rest of the skin is perfectly smooth, we learned that there was some eruption on the hips, and on inspection we find typical patches of dry, papular eczema. Here on either hip and over the upper part of the sacrum are spots of a yellowish hue, margins irregularly defined and with numerous distinctly papular elements.

The following are some of the reasons to be applied to diagnose the eruption before us from the *tinea circinata*, the *herpes circinatus* of older writers, which is entirely local in origin and due to the growth and development of the vegetable parasite *trichophyton* in the epithelium and hairs of the part. First, the border of the eruption is irregular in shape and not well defined, fading here in some places gradually into a healthy skin, while the margins of the parasitic affections are sharply cut, being due to the actual pre-

sence of the foreign element, the skin being abruptly healthy beyond the place of its encroachment; as to the irregular border in the present patch we know that the vegetable parasitic diseases spread centrifugally and present a more even, circular margin, not broken into in places, as this is; second, the eruption here is very itchy, as the scratched papules show; third, there are no scales, but on the contrary a roughness due to distinct papulation, whereas the surface within the margins of a spot of ring-worm present a uniform appearance, smooth, with a certain amount of rather easily detached scales; fourth, the existence of other portions of disease on another part of the body, namely the hips, presenting characters very plainly distinctive of eczema; fifth and lastly, if you should scrape the surface and examine the debris from this patch under the microscope, you would fail to find the spores and mycelium composing the parasite found in *tinea circinata*. Our time here does not usually permit of this examination and I deem the other features quite sufficient to establish beyond doubt, in this case, that the eruption on the arm is simply a papular eczema and not the *tinea circinata* which it so much resembles at first sight. Let me however, strongly urge you to use the microscope in deciding these cases in private practice, for the certainty of diagnosis thereby attained fully repays the trouble, and the determination of the parasitic or non-parasitic nature of an eruption is not a very difficult one, as I shall have occasion to demonstrate to you on another occasion, and furthermore the matter is made pretty clear in the text books.

Our little patient is a rather delicate child whose nutrition is evidently below par. I will order him cod-liver oil internally, which is one of our very best remedies in many of these diseases of the skin; locally he will receive the following ointment, with directions to have it firmly rubbed into the parts night and morning: *R* Ung. citrin. $\mathfrak{z}$ iss. Ung. simpl. $\mathfrak{z}$ vi. *M*; in private practice this should be perfumed, as with a drop or two of oil of bergamot or bitter almonds. Remember that this ointment is directed for a hard, dry, chronic patch of papular eczema, which has never given a history of having been moist, such a prescription used on an acute eczema might produce an untold amount of irritation.

This next little patient exhibits just such an eruption, which injudicious treatment might kindle up into a disease distressing beyond measure to child, family and doctor, but which is doing very well under the very different measures which have been advised at former visits.

CASE III. *Impetiginous eczema of cheeks and lower extremities.*—Albert N. aged $2\frac{1}{2}$ years, has had an eruption similar to the present one since he was six months old, it disappearing at times, to reappear soon again. The father of the child has asthma, the mother has been subject to furuncles, as also the eldest brother, now five years of age, and the child's maternal grandfather has had rheumatism. This little one therefore, comes naturally by its eczema and also its asthmatic breathing, especially after eating, a not very uncommon affection in children with this form of eczema.

At present there is an impetiginous eruption covering the patient's cheeks, with a tendency to the formation of crusts. The skin here presents the characteristic appearance of a moist, reddened surface, very itchy, with more or less of a pustular element here and there. On the back you find the skin far from normal, it being very papular, hard and dry, and evidently gives the patient great annoyance from the itching. The inner and posterior surface surfaces of both legs are covered with a dry and scaly eruption, quite punctate, with here and there groups or patches of disease composed of aggregated papules. The eruption is on the decline, and you have heard the mother say that she believes that the internal remedies have effected a great change, and that she has not been very faithful in the use of the local treatment. The child from the first was put upon DeValangin's solution of arsenic (liquor arsenici chloridi), it being prescribed diluted with equal parts of cinnamon water; commencing with four drops of the mixture after meals, the dose has been increased by a drop a day until now he takes ten drops of the arsenic, or 20 of the mixture, three times a day, further diluted, of course, in a teaspoonful or so of water. Locally he has had only the oxide of zinc ointment; he has had no other remedies.

Now some may think that this is at variance with what I have previously said in reference to a routine treatment of eczema with

arsenic and zinc ointment, but quite the contrary is the case. What I would guard you against is getting into the rut traversed by so many, who, as soon as the diagnosis of eczema is made, prescribe as it were necessarily, these remedies, whereas you will see comparatively, but very few cases, treated by me with these two agents alone, or even combined with others. There are reasons in this case for the employment of them, and I think it would be as great an error for you not to use this treatment *when it is indicated*, as to employ it when it is not required.

The reasons, then, for giving this child this line of treatment are: first, the arsenic is called for by the itchiness of the eruption, for you have had abundant confirmation from the mouths of patients and from the parents of little patients here, to show, that when under the full influence of arsenic there is less irritation of the skin, the sleep is better and the eruption consequently improves, with or in consequence of local treatment; second, the child has asthmatic breathing and the father is distressed at times with the same, and arsenic certainly does alleviate if not remove this, in proper cases, that is, in those not due to organic disease, as that of the child assuredly is not; third, the rheumatism in the family, together with the appearance of the child and its history, and that of the eruption mark the case as one of the arthritic variety of eczema, which, as the French especially have taught us, is benefitted by arsenic and alkalies. We have tried the arsenic first and alone, and the success confirms the theory; the alkalies have not been given because, as a rule, children do not require them so much as adults, there is not the tendency to hyper-acidity that we find in those of older years. The zinc ointment was given merely because it is one of the very best mildly stimulating and yet soothing applications; and, furthermore, it prevents the friends from using worse things, and, if well applied, it serves perfectly to exclude air and dust and to keep the surface from drying up and crusting. We will continue the same treatment, there are no indications for a change.

ART. II.—*The Sympathetic Nervous System.* By S. W. WETMORE, M. D.

[Read before the Buffalo Medical Association, Feb. 9, 1876.]

MR. PRESIDENT AND GENTLEMEN :

Hoping you will not become too “nervous” while listening to the theme chosen for consideration this evening, I will crave your indulgence while delineating in my feeble way, how much, and yet how little we know of the

GREAT SYMPATHETIC NERVOUS SYSTEM.

I say *great*, for such it has been called, and correctly so too ; not, however, on account of its magnitude of structure, or organization, but it is truly great in its functions, its physiological actions, and pathological conditions.

Doubtless you are as familiar and as well informed concerning its structure, arrangement, distribution, &c., as the author of this hastily prepared paper. But perhaps a brief resume may not be uninteresting, and serve to refresh our memories, and thereby enable us the better to comprehend its physiological characteristics and some of its peculiar morbid phenomena.

Suffice to say that this system of nerves consists of a series of ganglia called centres, which are connected by intermediate nerves forming a continuous cord (called the *trunk* of the sympathetic) on each side of the spine from the first cervical vertebræ to the ganglion impar, situated in front of the cocyx. They can also be traced up into the head, where they all communicate with the fifth cranial nerve. For convenience of description the ganglia are divisible into groups, according to the position they occupy.*

Thus there are 4 cephalic, 3 cervical, 12 dorsal, 4 lumbar, 6 sacral and 1 coccygeal.

The four cephalic are the ophthalmic, sphenopalatine, otic and sub-maxillary.

The ophthalmic (lenticular or ciliary), is situated deeply in the orbit between the optic nerve and external rectus muscle. It throws off some ten or fifteen ciliary nerves which perforate the globe and are distributed to the tunics, and particularly to the iris

* A large number of diagrams were here referred to, illustrating the position of the ganglia in the head, neck and trunk, their minute structure, cells, fibres, and how their nerves communicate with each other, and with those of the cerebro-spinal system.

and ciliary muscle. It communicates with branches from the motor oculi and ophthalmic division of the trigeminus. It also sends a very minute filament through the center of the optic nerve to the retina in company with the *arteria centralis retinæ*.

The second or sphenopalatine, called Meckel's, is the largest of the four and is situated in the sphenomaxillary fossa, near the sphenopalatine foramen.

It receives motor filaments from the facial, and sensitive fibres from the two sphenopalatine branches of the 2d division of the fifth.

It is distributed to the periosteum of the orbit, to the gums, to the roof of the mouth, the palate and uvula, the tonsils, the mucous membrane of the nose, the pharyngeal mucous membrane, the middle auditory meatus, the levator palati and azygos uvule muscles. The 3d, otic or Arnold's ganglion, is situated on the inner side of the 3d division of the 5th pair, immediately below its exit through the foramen ovale. It is furnished with motor power by the facial, and filaments of sensation by the trigeminus and glossopharyngeal.

It is distributed to the mucous membrane of the eustachian tube, to the tympanic cavity, to the tensor tympani, and tensor palati muscles. Arnold claims also that by a filament from the lesser petrosal it communicates with the auditory nerve, hence it is called "otic or auricular."

The 4th, submaxillary, also discovered by Meckel, is situated at the lower border of the gustatory nerve on the submaxillary gland.

Its motor root is from the chorda tympani, a branch of the facial nerve, its sensory filaments are from the gustatory. Its branches of distribution are to the sublingual glands their ducts, and the mucous membrane of the mouth.

The three cervical ganglia are situated opposite the 3d, 5th and 7th cervical vertebræ respectively, and are called the superior, middle and inferior ganglia. When the middle is wanting, the inferior is found fused with the 1st thoracic ganglia.

These ganglia are connected by the trunk of the so-called "sympathetic cord." They also communicate freely with the cranial ganglia, with the 3d, 4th, 5th and 6th cranial nerves, and with

filaments of the cerebro-spinal system. A network of interlacing fibers cover the branches of the external carotid and vertebral arteries. They also accompany the pneumo-gastric, hypoglossal, and glossopharyngeal nerves, forming the pharyngeal plexus, sending filaments to the thyroid gland, the pharynx, larynx, organs of voice, trachea, œsophagus, heart and lungs.

Beneath the arch of the aorta the plexus is joined by the nerves given off from the inferior cervical ganglion, viz: the inferior cardinals. These nerves communicate freely with the recurrent laryngeal.

THORACIC GANGLIA.

There are usually twelve, though sometimes two are fused into one.

They are situated behind the pleura, over the head of each rib.

The first is the largest. Each ganglion receives branches from the corresponding spinal nerve.

The nerves proceeding from the ganglia supply the thoracic, and part of the abdominal and pelvic viscera, and send a small filament to each vertebra according to Cruveilhier.

From the 1st and 2d ganglia branches are given off which join the cardiac plexus, and form the 3d and 4th, like filaments to the pulmonary plexus. While the *great splanchnic* nerve is formed by branches from the 6th to the 10th ganglion. The branches descend obliquely along the sides of the bodies of the vertebræ, and unite into a single nerve, which is a large, white, rounded cord.

It penetrates the diaphragm and passes into the *semilunar ganglion*, sending a few filaments to the renal plexus and suprarenal capsules.

The *lesser splanchnic* nerve arises from the 10th and 11th ganglia passes into the abdomen and is lost in the renal plexus, which is formed in the filamentous termination of the *smallest* or *renal splanchnic* nerve, from the last or 12th ganglion.

THE SEMILUNAR GANGLIA.

The largest of the sympathetic, sends off from each side, radiating branches, and form the *solar* plexus. This surrounds the

celiac axis like a ring, and is called the brain of the abdomen, for it contains a large quantity of ganglionic matter.

From this as from a root, other secondary plexuses branch off and twine around the arteries, thus forming the phrenic plexus the coronary, gastric, hepatic, splenic, superior mesenteric renal, spermatic, &c.

The four lumbar ganglia are situated upon the bodies of the vertebræ. Their branches unite to form the aortic and hypogastric plexuses, and follow the course of the blood-vessels.

The five sacral ganglia and ganglion impar, send filaments to all the pelvic viscera and the blood-vessels. The most interesting ones are the *uterine* nerves, which supply that organ, and the fallopian tubes. Within the substance of the uterus collections of ganglionic cells are found to connect the nerves. These were described by Dr. Robt. Lee in 1857. Recent researches have proven the existence of ganglionic cells in connection with the terminal filaments of this system of nerves almost everywhere particularly in the mucous membrane as well as the muscular layer of the alimentary canal, pancreas, spleen, the liver and its ducts, the salivary glands, the blood-vessels, lungs, larynx and trachea, lymphatics, bladder, ureters, the generative organs, ciliary muscle, iris and lachrymal canals.

It will be observed that they seem to have an affinity for or are distributed to organs and structures containing large quantities of *yellow elastic fibrous tissue*.

It will be remembered that this tissue enters very generally into the structure of organs in which the property of elasticity is an important quality, and, in certain situations, it is the sole tissue present.

As in the ligamenta sub-flava, chordæ vocales, thyro-epiglottic ligament, crico-thyroidean membrane the membranous layers connecting the cartilagenous rings of the trachea and bronchial tubes, the ligamentum suspensorium penis, and the middle coat of arteries.

It is also met with in the alimentary canal, the œsophagus, and anus, and around the male and female urethra.

Can we not then account for many morbid conditions, with

which we are daily brought in contact, supposed to be "reflex action," before we take up the functions of this important piece of mechanism.

Concerning the *intimate structure* of the sympathetic ganglia and nerves little need be said, inasmuch as they possess very little physiological importance. In form the ganglia are rounded, ovoid or pear-shaped. The interior is made up of nerve-cells, nerve-fibre, and connective tissue. The cells are not unlike in appearance those of the 'encephalon and spinal cord. Some are unipolar, some are bipolar, and some are multipolar.

The true efferent fibre which make up the sympathetic nerve is medullated (Remak), and measure from 1-10,000 to 1-5,500 of an inch in diameter.

The connection between the cells and fibres is supposed to be the same as in the cerebro-spinal centre.

As the sympathetic nerves leave the ganglia, there may be seen accompanying them both motor and sensitive filaments from the spinal cord. These can also be traced to their ultimate ramifications.

They are softer and more grayish in color than the spinal nerves and hence we are able to designate the one from the other, when they communicate, by the white appearance of the latter.

FUNCTION.

The older writers had no very clear ideas concerning the functions of this system of nerves.

It was not until 1725 that the influence of the sympathetic nerve of the neck was demonstrated to be propagated from below toward the head, and not from the brain downward, and then only so far as the eye was influenced by its division. This discovery was made by Pourfour du Petit.

In 1816 Dupuy removed the superior cervical ganglia in horses, with the effect of producing injection of the conjunctiva, increase of temperature in the ear, and an abundant secretion of sweat upon one side of the head and neck.*

* Flint.

These experiments showed the sympathetic has an important influence on nutrition, calorification and secretion.

In 1851 Bernard repeated the experiments of Petit, dividing the sympathetic in the neck on one side in rabbits, and noted on the corresponding side of the head and the ear increased vascularity and an elevation of temperature amounting to from 7° to 11° Fahr.

In 1852 Brown Séquard repeated these experiments, with like results, and attributed the elevation of temperature directly to an increase in the supply of blood to the parts affected. He also demonstrated that its section paralyzed the muscular walls of the arteries, and further, that galvanization of the nerve of the neck caused the vessels to contract.

This was the discovery of the vaso-motor nerves."

Soon after, however, Bernard performed analogous experiments, and after having divided the sympathetic in the neck of a large rabbit, cut off with a sharp knife both ears just above the head, and found that the artery on the side on which the nerve was divided, would send up a jet of blood several feet high, while on the sound side it was much less forcible, and not unfrequently was not observed at all.

The influence of the sympathetic over the secretions are very marked, as shown by Peyrani, Bernard, Séquard, Moreau and others, who have paralyzed the sub-maxillary filaments increasing the salivary secretions.

It appears that galvanizing the sympathetic increases the amount of urine and urea, and is greater with the induced than the constant current.

"Dr. Moreau published in 1860 a very elaborate and important series of experimental observations on the influence of the sympathetic nerves upon the secretion of liquid by the intestinal canal, which are peculiarly interesting in their bearing upon the sudden occurrence of watery diarrhea."*

It can only be through the sympathetic nerves that the states or conditions of the mind can influence the muscular apparatus of organic life.

There are

many organs that are influenced on the one hand by

* Flint.

emotional states, and on the other by the state of expectant attention. The heart sympathizes probably more with the emotions than any other organ in the body. The physician can very often infer this while feeling the pulse, its beats frequently being audible.

The alterations in the diameter of the blood-vessels is wholly under the vaso-motor system or "nervi-molles," as is evinced in blushing, by the emotion of modesty or shame, or to the pallor which alternates with this, in many states of mental agitation."

"The influence of particular conditions of the mind in exciting suspending or modifying various secretions is a matter of daily experience—the *lachrymal* secretion, for example. The flow of *saliva* is stimulated by the sight, the smell, the taste, or even the *thought* of food, especially of such as is of a savory character."*

The same may be said of the tendency to micturition, not unfrequently fear, or anxiety, act as a powerful diuretic.

The peristaltic action of the intestines are often increased by fear or expectant attention.

Dr. Carpenter relates a case of a "Lecturer in a public institution who was always seized with a strong impulse to defecation during his lecture, and was greatly inconvenienced by the effort to restrain it."

The uterus and the generative organs are greatly influenced by certain states of the mind. We are all as accoucheurs familiar with the cessation of labor pains, on first entering the lying-in chamber, especially if we be a stranger to our patient.

There is probably no secretion that so strongly manifests the influence of the emotions, both upon its quantity and quality, as that of the mammary glands. The *modus operandi* is analagous to that which takes place in the act of blushing.

to the same effect says: "A *fretful temper* lessens the quantity of milk,

Sir A. Cooper says, "and produces much griping in the child. makes it thin and serous, and watery milk, followed by grip-

"*Fits of anger* produce a very irritable state of the system, leading to great excitement, ing in the infant, with green stools.

"*Grief and anxiety of mind* have a great influence on the system and diminish the quantity and alters the quality of the milk.

* Carpenter.

“*Fear and terror* often instantly stops the secretion.”

Carpenter says “he has positive evidence that the mammary secretion may acquire an actually *poisonous* character under the influence of violent mental excitement,” and cites cases where children have died in convulsions immediately after nursing the mother, who had met with some distressing occurrence.

From what has been said, it appears obvious that this system of nerves serves as a medium of reflex action between the motor and sensitive portions of the alimentary canal, or the digestive, excretory and generative apparatuses, and it is positive that it takes part in reflex action with the cerebro-spinal nerves.

There are accordingly three different kinds of reflex actions taking place wholly or partially through the sympathetic system which may be observed to occur in the living body.

1st. *Reflex actions taking place from the internal organs through the sympathetic and cerebro-spinal systems to the voluntary muscles and sensitive nerves.*

The convulsions of young children are often owing to the irritation of undigestible food in the intestinal canal.

Attacks of indigestion are also known to produce temporary amaurosis, double vision, strabismus, and even hemiplegia.

Nausea and a diminished or capricious appetite are often prominent symptoms of early pregnancy, induced by the peculiar condition of the uterine mucous membrane.

2d. *Reflex actions taking place from the sensitive surfaces through the cerebro-spinal and sympathetic systems to the involuntary muscles and secreting organs.*

Imprudent exposure of the integument to the cold and wet will often bring on diarrhea.

Mental and moral impressions conveyed through the special senses will affect the motions of the heart, and disturb the processes of digestion and secretion.

Terror, or an absorbing interest of any kind, will produce a dilatation of the pupil, and communicate in this way a peculiar wild and unusual expression of the eye.

Disagreeable sights or odors, or even unpleasant occurrences,

are capable of hastening or arresting the menstrual discharge, or of producing premature delivery.

3d. *Reflex actions taking place through the sympathetic system from one part of the internal organs to another.**

The contact of food with the mucous membrane of the small intestines excites a peristaltic movement in the muscular coat. The mutual action of the digestive, urinary and internal generative organs upon each other takes place through the medium of the sympathetic ganglia and their nerves.

The variations of the capillary circulation everywhere, and particularly in the different abdominal viscera, corresponding with the state of activity or repose of their associated organs, are to be referred to similar nervous influence. These phenomena are not accompanied by any consciousness on the part of the individual."

The functions, then, of the sympathetic nervous system can well be defined: to govern the circulation, calorification, respiration, secretion, excretion and nutrition.

The morbid conditions produced from or influenced by this system are very variable.

For several years last past the subscriber has given this theme a special daily thought, and has arrived at the following conclusions [which are corroborated, if not verified, by a multiplicity of cases]: That many of the morbid conditions for which we are daily consulted are reflex phenomena due to pathological changes in the sympathetic ganglia, their nerves, or their terminal cells. What these changes are it is not always easy to determine; but for the most part they are either an anemia or a hyperemia, in other words, a paralysis or an over-excitation, which may be idiopathic or traumatic.

Perhaps the most common malady due to reflex action is the so-called spinal irritation, with which we are all familiar. Full well do I remember the first *well-marked* case that I ever saw. It was in the autumn of 1862.

My patient was a lady aged 29 years, unmarried, and a perfect picture of health, large, fleshy, and weighing about 170 pounds.

* Dalton,

She had been a victim of misplaced confidence, for two years having been under the care of various Homeopaths.

She was accustomed to sudden and very severe attacks of pain in the epigastric region, which were accompanied with excessive and prolonged vomiting, that for days together prohibited her taking any food that she could retain.

During one of the attacks, I was summoned. The hypodermic use of morphia, and all the ordinary remedies, only served to palliate temporarily, and after several days of unremitting effort having proven futile, I called in council Prof. Rochester and the lamented Eastman.

Although I had made diligent inquiry and careful explorations of the vertebral, cerebral and uterine regions, the first-named gentleman, having had an extensive experience in such cases, was enabled by his well-trained finger to point to the single offending spinous process.

The oleum tiglli paint was directed to be applied twice or thrice daily, which in a short time alone cured my patient, who was completely relieved for a period of two years, during which time she became a married woman and a mother. Soon after, however, the same old train of morbid phenomena returned, but was again repelled with as much facility with the same remedy.

Succeeding years having brought like cases under my observation, I began to wonder why this particular portion of the human economy should be the seat of this peculiar irritability, and then considered the tissues of which the structures that reflected over and invested the spinous processes were composed.

Knowing that the sole organization of the ligamentum nuchæ, the ligamenta subflava of the arches of the vertebræ was made up of *yellow elastic fibrous tissue*, and that each vertebræ was supplied with a sympathetic nerve from the thoracic and abdominal ganglia, I concluded that the fibre-cell, or what Kolliker describes as the stellate branching corpusules, denominated by Virchow connective tissue corpusules, of which it is composed, had something to do with its causation. Then the instances of these cells in the body—which have already been given—were considered, and very readily I found that these were just the localities; that

they composed the structures and organs most frequently involved in reflex-action.

When we take into consideration that the nerves of organic or vegetative life are distributed principally to the intrinsic muscles or to non-striated muscular fibre, over which the *will* has little, if any, control, we can the better understand how reflex-action occurs when their centers or ganglia are abnormally disturbed.

Unfortunately for science, though very fortunately for the human race, the cases are rare in man of traumatic injury confined to the sympathetic.

One case, however, has been reported recently by Mitchell,—where a gunshot wound in the neck produced contraction of the pupil, and flushing of the face of the same side.

Several cases of unilateral sweating of the head have recently been reported, supposed to have been produced by aneurism.

Several cases of temporary deafness have come under my observation that could only be accounted for by some disturbance in the function of the vaso motor nerves surrounding the auditory artery, or some abnormal condition of the otic or spheno-palatine ganglia.

Temporary loss of vision is doubtless not unfrequently due to some change in the ophthalmic ganglia, or to the centralis retinae nerve.

Those cases of sudden ecchymosis of the conjunctiva, coming on, perhaps, of a night, without any known cause, can in some instances only be accounted for by some change in the nerves from the cervical ganglia, probably from cold, or an enlarged lymphatic gland.

I have a case of loss of the sense of smell at this writing, Jan. 18th, which has existed for some months, but is improving rapidly, while being treated for a congested and ulcerated condition of the cervix uteri.

The cases of *aphonia* are numerous, dependant upon uterine irritation, and doubtless my friend Prof. White can enumerate them by the scores.

Although the organs of voice are supplied by the cervical ganglia, they communicate freely with the recurrent laryngeals,

branches of the pneumo gastrics, and with the entire chain of the sympathetic ganglia.

Considering that the chordæ vocales, thyro-epiglottic crico-thyroid membrane, the membranous layer connecting the cartilaginous rings of the trachea and bronchial tubes, and the œsophagus, are composed *principally of yellow elastic tissue*, can we not the more readily account for the "globus-hystericus," so common in hysteria, another form of reflex action?

A very peculiar form of this disease has come under my observation several times during the past year. The patient, married, aged 24 years, has never borne children, has no uterine, spinal or cerebral trouble. Menstruation normal, as to time, quantity and quality, and without pain.

The paroxysms are characterized by great distention of the stomach, so much so as to enable the observer to trace its outline and form distinctly. This condition usually continues from one to three days, great pain accompanies it, and the stomach is extremely sensitive on pressure.

The distension is not produced by flatus, but there appears to be a phlogistic condition.

The case has been under the care of the best of the fraternity in Chicago, and other cities. She claims never to have been benefited by any treatment, until galvanism was applied over the origin of the great splanchnic plexus. This controls the paroxysms and, without doubt, prohibits frequent attacks.

Several cases have recently come to my notice where the heart's action during labor has been very much interfered with, two of which I will detail, as they were extreme cases:

CASE I.—October 5th, 1875, I was called to see Mrs. D—, aged 22, first child. Labor had hardly commenced, pulse *twenty-seven* (27) per minute, skin cool. An examination of the heart revealed no abnormal organic condition. She had never had rheumatism, and had always enjoyed good health.

The labor progressed favorably, and terminated in eleven hours by the use of the forceps, without chloroform. The pulse continued nearly the same for five hours after delivery, when they

began to increase gradually, and twenty-four hours after they were found to be 64, their normal condition.

CASE II.—October 28, 1875, was called to Mrs. S—, aged 24, in labor with her first child; by digital examination found the os dilated not larger than a five-penny piece; cephalic presentation, and everything normal save the pulse, which counted *one hundred and forty-eight* (148) per minute, and continued the same throughout the labor; and four days after, when it resumed its normal condition, *seventy-two* (72) per minute.

How can we account for these extremes, apparently from the same cause, and yet different effects, other than that they were produced by some morbid conditions of the sympathetic ganglia, probably the semilunar or uterine plexus? What the pathological condition was is difficult to determine. It is probably "one of those things that no man can find out."

Within a few weeks I have treated a case of persistent diarrhea, following a mild case of enteric fever, with galvanism, with success, after all ordinary remedies had failed (including argent. nitras and the vegetable astringents).

The diarrhea continued some seven weeks after the patient left the sick-room, and after the third application, he reported himself well.

Many cases might be cited elucidating the influence of the sympathetic nerves on diseases existing on account of perverted nutrition, among which might be enumerated other forms of diarrhea, marasmus, atrophy, ulcers, gangrene, and diseases of the scalp, baldness, and the sudden changing of the color of the hair by fright, terror and great anxiety of mind.

A single well-marked case of the latter having come under my personal observation, I will briefly narrate it :

Mrs. B—, a particular friend of my family's, aged 32, residing at Niagara Falls, having missed her little boy, seven years of age, and believing he had fallen over the bank into the rapids below, became so terror-stricken that for a time she lost her consciousness. The next day, towards evening, the body of the boy was found in the whirlpool. The sad facts were conveyed to the heart-broken mother, who was still in a semi-conscious condition. The follow-

ing morning her hair was found to have changed from a *black* to a glossy white, and remains the same to this day, eleven years having elapsed since the occurrence. Her eyebrows, however, remain unchanged.

Trusting that a sufficient number of cases have been cited, and that the functions and physiological actions of this organic system of nerves have been sufficiently delineated to establish beyond cavil or doubt that these abnormal conditions may arise from morbid conditions of the ganglia or nerves, and without traumatic cause, I will close, after a word concerning the therapeutical indications.

Obscure as the *modus operandi* may appear, I have as much confidence in galvanism, or galvano-magnetism, in some cases, and counter-irritation in others, as I have in quinine in intermittant fever, and mercury and iodide potash in syphilis.

Doubtless, you are all familiar with the fiery ordeal through which the Hon. Charles Sumner passed, under the care of Brown Séquard, in Paris, in 1857. In which case the moxa was used a half-dozen times without chloroform.

The little heroine Clara Morris was also treated in a like manner.

Few cases require the moxa. The most of them will yield "*certeris paribus*" to milder forms of counter-irritation.

The cases indicating the application of galvanism are very variable, some yielding readily to the friction by the hands of the "rubbist," the charlatan, "the seventh son of the seventh son," etc., etc., others requiring a current sufficient in force to paralyze the *par vagum*, and kill your patient by stopping the heart's action, which Sequard cautions us against, saying that "he came near killing his best friend once, while galvanizing the cervical ganglia for headache."

That many remarkable recoveries have occurred in the hands of the "friction doctor," cannot be doubted by any physician of ordinary observation.

But the key to their success lays not in their peculiar endowment of electric generation, but the influence over the vaso-motor nerves, which *anybody* can produce by a well-directed effort.

Expectant attention has no little power over the remedial influence of the "frictionist," and if he is successful in keeping his patient alive to a *confident expectation* of a cure, the malady will not unfrequently succumb.

In this hasty, hurried and imperfectly-demonstrated system of sympathetic nerves, I do not claim to have made any new discoveries; but if I have made more lucid the rationale of its morbid phenomena, then I have attained my object, if not, it is labor lost to science.

Trusting, however, that I have stimulated your disposition to inquiry, and that your vigilance will "*pari passu*" with your opportunities, I respectfully submit these suggestions.

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ART. III.—*Exsection of Femur for gun-shot injury. Five inches of bone removed, followed by complete recovery, with only three inches shortening.* By CONRAD DEIHL, M. D.

When the authors of Military Surgery are consulted, we are surprised to find how generally fatal is compound, comminuted fracture of the upper third of the femur, from gun-shot injury. Amputation has almost uniformly been practiced and recommended. Erichsen, in speaking of gun-shot injuries, says: "Severe compound and comminuted fractures of the femur, with destruction of surrounding tissue, even though the vessels and nerves be not injured, demand amputation." He gives the ratio of mortality as 86 per cent.; amputation at hip-joint, 100 per cent., or *all* fatal. The following case is in all respects interesting and instructive, and is reported as showing, as well as any one case can, the advantages of true conservatism in operative surgery. Sergeant Schwinn of Buffalo, was out target-shooting, when by accident a minnie ball struck the right femur about four inches below the trochanter major, producing compound, comminuted fracture of the femur, with destruction of much tissue. He was seen by Dr. Marcle of Black Rock, soon after the accident, who dressed the wound temporarily, and had him removed to his residence in the city. Seeing the gravity of the injury, several experienced physicians were called in consultation with Dr. Marcle and myself;

among the number, Prof. Julius F. Miner, who, upon arrival, and after making examination, advised Exsection instead of amputation, remarking, that amputation at the hip joint, or so near it, would be fatal. The experienced physicians present all heartily seconded the proposal, and Dr. Marcley invited Dr. Miner to conduct the operation.

The operation consisted in projecting the ends of the bone through the lacerated wound, and sawing them off as smoothly as possible. Fifty pieces, varying from $\frac{1}{4}$ to $4\frac{1}{4}$ inches in length, were removed, making in all, five inches of the shaft. Hemorrhage not being troublesome, the leg was dressed in straight position with side splints, no effort being made to approximate the soft parts. The muscles were allowed to contract, with the view of bringing the bones in apposition, and the hope of obtaining bony union, the amount of shortening being considered as comparatively unimportant. To save the life was the principal object; shortening and deformity being left for future consideration. By arrangement of Drs. Marcley and Miner, the patient was now left in my care. By means of side splints and simple dressings I was able to keep the thigh in proper place in straight position, until complete union of the wound and bone. No very unfavorable symptoms were seen after the operation. The case progressed favorably and was dismissed *well*, bony union being complete in thirteen weeks from time of accident, with about three inches shortening, or two inches less than the length of the bone removed by Exsection, this being one of the remarkable features of the case. Patient now walks comfortably upon the leg, the shortening being relieved, in part, by cork sole; so that the usual gait upon the street can scarcely be seen to be at all defective.

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ART. IV.—*Buffalo Medical Association.* Tuesday Evening, February 1st, 1876.

The Vice-President, Dr. Wyckoff, in the chair.

Members present: Drs. White, Wyckoff, Cronyn, Willoughby, O'Brien, Brecht, Mynter, Little, Bartlett, Boysen, Hopkins, Fowler, Briggs, Thos. Lothrop, Folwell, Trowbridge, Harding, Howe,

Samo, Wetmore, Coxe, T. M. Johnson and Southwick. Dr. Shannon and Pettit by invitation.

Minutes read and approved.

DR. WILLOUGHBY was appointed as essayist for the next meeting.

DR. MYNTER, under voluntary communications, read a paper on the operative treatment of pleuritic effusions, and exhibited the apparatus which he used in aspirating the pleural cavity.

DR. WETMORE, the essayist for the evening, read a paper on the Sympathetic Nervous Syssem. See page 328.

DR. WHITE said that he came as a learner and had not been disappointed. The Dr. referred to having witnessed the experiments of Bernard upon the sympathetic system, after witnessing these he went to London, where he fell in with Robert Lee, who had recently been making dissections of Uteri, both of the virgin and in those who had been pregnant. Lee was kind enough to show him these dissections and demonstrations. He said that Dr. Wetmore had spoken of nausea and vomiting supervening upon pregnancy, and if he understood rightly, he had said it was due to a peculiar condition of the mucous membrane. He could not agree with this, he agreed that it was occasioned through the sympathetic nerve.

Moreau attributes it to the compression of the Uterus, it having descended and being confined to the limits of the pelvis.

In several instances which had occurred in his practice, where retroversion or retroflexion had coexisted with pregnancy, the nausea had been greatly increased. There is no point in the sympathetic nervous system which is so interesting as its relation to the uterine system.

He referred to the case of a young lady, who consulted him for loss of voice, which had been of some weeks duration. The patient was not hysterical, and had never had a similar attack. Laryngoscopic examination made by Dr. Brush revealed a partial paralysis of the vocal cords. No local condition could be found as the cause. A careful inquiry revealed the fact that the patient was suffering from Uterine disease. It being treated and cured, the voice was restored.

He had under treatment another case, on two different occasions, for a similar conditions of things. The patient was the wife and daughter of a physician. The loss of voice, which occurred first ten years ago, and again within a few months, was due to retroflexion. Neither the father, or husband, nor himself were inclined to attribute the loss of voice to hysteria. In conclusion, he expressed his thanks to Dr. Wetmore for his excellent paper.

DR. CRONYN said if he were to have suggested a theme for the evening he would have asked him to enlarge upon this very subject. His only fault was that it was too short. In 1850 and '52, Dr. Davis, a gentleman in one of the provincial towns in England, was inclined to lay great stress upon the importance of the function exercised by the solar plexus. At that time, 1851-52, the speaker had a patient who was suffering with obstinate nausea. Dr. Flint, then residing in Buffalo, saw the patient in consultation, but could suggest no relief. The patient retained nothing upon the stomach, and was only sustained by means of enema. Reading Dr. Davis' lecture, he put some of his ideas into practice and applied a blister opposite the solar plexus, and in a few hours the patient was able to retain food.

We find serous effusion, arrested by galvanism and other means, which influencing the organs primarily engaged, cures the effusion.

With regard to Robert Lee's experiments, he had no doubt as to their truth and exactness.

It will be found everywhere in the body, that the ganglionic system has a controlling influence. A summary might be made that they are the life of the body.

DR. BARTLETT would thank Dr. Wetmore. He said that the more we desire to advance in medical science, the more we must study the nervous system. He wished also to thank Dr. Mynter; thought that both papers were a credit to the society.

DR. HOWE read the following :

"In a paper which I had the honor of presenting at a former meeting of this society, I mentioned the fact that irritating gasses and vapors often exert an injurious effect upon the eye. This called forth from one of the members some statements in regard

to the injurious results from a similar cause experienced by the workmen in the tunnel at the water works, then being constructed under the Niagara River. The few facts given at that time were so entirely new to the most of those present, and so interesting to myself, that I determined to give the subject the study which its importance in an ophthalmic point of view demanded. A brief résumé of the conclusions arrived at, may seem worthy of attention, if only as a matter of local interest.

In order to show the relative position of the various parts of the tunnel, I present here a diagram illustrating the general plan of its construction. The shaft at the shore end is 67 feet deep, 310 feet out, there is a second shaft 57 feet deep sunk from Bird Island Pier. The shaft at the inlet pier is 40 feet deep, and the entire tunnel, which is 1020 feet long, has an inclination upwards of 13 feet.

The work was begun on the 12th of May, 1870, and advanced without any special difficulty until the first shaft had been sunk to the depth of 47 feet. Thus far it was necessary to cut through layers of solid rock, but here a stratum of loose, pliable limestone was struck, some 6 to 8 inches thick. It was through this that the sulphurous gas permeated. Immediately, upon reaching that point, the workmen began to have trouble with their eyes, which became swollen and tender, and the longer they were exposed the worse the inflammation grew. There was one time when excavating this portion that every man was effected to a greater or less extent. This point being passed, the inconvenience was temporarily lessened. Soon it was manifested again however, when the same stratum of rock was cut by the sinking of the second shaft, where the trouble was experienced, and in an equal degree. When the excavation was advanced about 500 feet beyond this middle pier, work was temporarily suspended. During that time the gas had an opportunity to collect in such quantities that upon resuming operations, two men who entered the Bird Island shaft, were taken up, a short time after descending, in a practically blinded condition. From this second point until near the end of the tunnel no unpleasant effect were experienced. At the latter part, however, the same stratum was met with a third time, and would have proved troublesome, but for the perfection to which

the ventilation had been carried by means of condensed air. Such is the account of the work as given by the chief engineer, Mr. Knapp, who kindly furnished me most of the data.

The general form of the disease thus produced, was that of a conjunctivitis. Not being in Buffalo at the time when these cases were most frequent, my personal observations did not begin till a later date, but I have been assured by physicians that such was its character, and the statements of the workmen as well as the result of the treatment, confirmed that diagnosis. The inflammation would show itself in a time varying from an hour to a day and attain a condition which ranged from the slight catarrhal form to the most violent purulent type. Removal from the irritating causes, cooling applications, or the workmen's favorite remedy, a potato poultice, usually produced a cure in a few days. Some were incapacitated for work for a week or more, but in general the worst was over in three or four days. The principal opportunity I have had of studying this process has been upon my own eyes. Finding that they were particularly susceptible to the influence, I could notice not only the different changes in the course of the disease, but what remedy produced the best results, and I became convinced that it was a conjunctivitis to be treated in the usual manner.

Seeing thus the effects which are produced by the gas, we naturally inquire more exactly as to its character. I have spoken of it as sulphurous, and so it is. Immediately on descending the shaft, the peculiar odor of rotten eggs that greets ones nostrils leaves but little doubt as to the presence of sulphuretted Hydrogen. At several places there could be seen veins through which water came, having a distinct sulphurous taste, while the rocks in that vicinity were covered with a whitish slime. For the purpose of analysis I brought away specimens or both the water and the deposit. The former soon lost its peculiarity from exposure to the air, while the deposit, which was white, changed its color by decomposition but still retains its original perfume. To ascertain its character beyond doubt an analysis was made by a professional chemist, Prof. W. H. Pitt, and the result showed that the conjectures were right. The presence of sulphur in such lo-

calities is nothing unusual. It occurs in another part of this city, and almost everywhere in rocks when there is that process going on in the vicinity, which is known as destructive distillation. The former forests of the carboniferous age have been converted into coal in some places, and in others into petroleum, carburetted Hydrogen (marsh gas), or into sulphuretted Hydrogen. In this tunnel, then, the workmen simply struck sulphuretted Hydrogen instead of striking oil.

The question of interest to medical men is not how it came there, but how it produced these effects on the workmen's eyes. This is a matter upon which a very little chemistry throws a great deal of light.

An analysis of the tears shows the solid portion of that secretion to consist almost entirely, of common salt, Sodium Chloride. Now it is found by chemists that Sulphur has a great affinity for Sodium, and that Hydrogen unites readily with Chlorine. This reaction occurring on the eye there results Sodium Sulphide and Hydrochloric Acid; two extremely irritating substances. To illustrate this effect, I have subjected the eyes of a rabbit to the influence of these substances in the proportions in which they combine, and as a result the conjunctiva is seen to be swollen and inflamed in a marked degree.

Such a chemical change, in general terms, is a rational, and to me the only manner of accounting for the symptoms. Knowing therefore, what the substance is and how it acts, there remains only the therapeutical question of how the unpleasant effects could be obviated in future cases. This is something not so easily done. Theoretically, the best way would be to apply to the eye some substance having a greater affinity for sulphur than has sodium. But practically, there is the objection that any such remedy in such a position would be almost as bad as the disease. It occurred to me, therefore, to place this third substance, not on, but near the eye, and for that purpose constructed the spectacles which I have here. They consist of an ordinary pair of gauze protectors or goggles, having the wire gauze covered with a piece of cloth. This cloth is intended to be wet with a saturated solution of Acetate of Lead—a fluid which combines readily with sul-

phurretted Hydrogen—and so to speak absorbs the gas in its vicinity. In order to test their value I covered one eye in this way and entered the tunnel, remaining in the parts where the gas was the most dense for an hour or more. At the end of that time the unprotected eye was sensibly effected, and the other was perfectly normal, while the cloth had become blackened by a deposit of the Sulphide of Lead.

For workmen in such situations I must say however, that anything of this sort is open to the objection that after a time it is rendered useless by the condensation of the moisture within. That the contrivance falls short of perfectly fulfilling the object, I know, but it is, at least, of temporary benefit, and is superior to anything thus far proposed.

DR. BARTLETT said that if the sulphur in the tunnel has been so prominent as to have such an effect on eyes the water coming through would not be pure.

DR. HOPKINS read an article in reference to the sanitary authorities of the city, and introduced the following resolution:

Resolved, That a committee of three, to be known as the sanitary committee, be appointed to investigate the regulations of our health department, and all matters pertaining to the sanitary government of our city, and to report to this Association at its next annual meeting, with such recommendations as they may deem proper, in order that this Association may appreciate, as fully as may be, the entire sanitary government of the city of Buffalo.

DR. WHITE said that he merely wished to assert a firm protest against Dr. Hopkins' assumption that the society had made no action in regard to public health. No longer ago than the last epidemic of scarlet fever the society had met and given publicity to its views on the subject.

The Chair appointed Drs. Hopkins, Folwell and Barnes as the committee.

DR. WHITE moved that the paper of Dr. Mynter lie upon the table until next meeting. Carried.

On motion the Association adjourned.

MISCELLANEOUS.

Ovarian Cyst; four Tappings in eleven years; two Labors at Full Term, and one Miscarriage during existence of the Tumor; Ovariectomy; Recovery; Menstruation from the Pedicle.

By T. F. Prewitt, M. D., of St. Louis, Mo.

MRS. O., æt. 39, the mother of six children; first discovered the existence of a tumor in the abdomen immediately after her confinement at full term, August 14, 1864. Three months after this was tapped for the first time, and has been tapped three times since, at intervals of two or three years; four to six gallons of fluid were drawn at each tapping; the last was May, 1874. She was again delivered of a child at full term December 23, 1866, and had a miscarriage at four months October, 1874. After the drawing off of the fluid, there was always a great improvement in her health and strength for about a year; but when the fluid reaccumulated, her health again suffered, she became emaciated, œdema of the lower extremities occurred, etc. In September last great distention had again occurred; she had already become considerably emaciated, and her feet had begun to swell. Made a diagnosis of ovarian tumour, a single large cyst, free from pelvic adhesions, and advised its removal. After explaining to her that tapping was not free from danger, that it was, at best, but a palliative measure, and that each resort to it exhausted her the more and diminished her chances of recovery from the only curative measure, ovariectomy, she decided, with a full knowledge of the dangers connected with it, to submit to the operation.

Every precaution was then taken to guard against septic infection. The house, fortunately, was a new one, well lighted, with a southern exposure. The bedding, clothing, towels and instruments were all thoroughly disinfected with a solution of carbolic acid, and clean, new sponges prepared.

At 12 o'clock, October 14, in the presence of Drs. J. T. Hodgen, A. P. Lankford, J. M. Scott, P. G. Robinson, J. K. Baudny, B. M. Hypes and W. A. McCandless, to all of whom I am much indebted for assistance during the operation, she was brought under the influence of Squibbs's stronger ether, Dr. McCandless kindly taking charge of the anæsthetic. She bore this well, her pulse remaining full, soft, and scarcely accelerated above the normal. As she was slow in coming under the influence of the ether, a few drops of chloroform were poured upon the napkin. At my request Dr. Scott introduced a catheter, and emptied the bladder. An incision in the median line of two inches and a half in length was first made, and subsequently enlarged to five inches.

The tumor was found free from adhesions, and a Wells trocar and canula, with tubing attached, was thrust in, and about two buckets full of a pale straw-colored fluid drawn off.

The sac was found to be connected with the right ovary, and to have for its pedicle nearly the whole of the breadth of the broad ligament, making a very short pedicle, with a breadth of at least six inches.

The Fallopian tube could be seen running along near the base of the tumor, greatly lengthened, extending up upon the side of the cyst, with the fimbriated extremity still well marked.

I had already determined, if the case was a favorable one for it, to try enucleation, as first suggested and practiced by Prof. Miner, of Buffalo. Accordingly, having first nicked the peritoneum of the pedicle, I inserted my finger under the base of the tumor, and commenced the process of peeling off the peritoneum, with the bloodvessels, from the cyst-wall proper. In the collapsed condition of the tumor I found some difficulty in doing this. I therefore requested Dr. Hodgen to introduce his hand, and carry it to the bottom of the cyst, to serve as a point of support. This facilitated the matter somewhat, but unfortunately I ruptured a large vein running along with the Fallopian tube, which bled to such an extent as to require ligature.

This decided me to abandon further attempts at enucleation and apply a clamp. The vein was compressed at the point of rupture, and the cavity that had been occupied by the base of the tumor sponged out. It was found that there *was no bleeding from this surface*, and instead of a broad, short pedicle, I had a long narrow one, made up of the collapsed peritoneum, areolar tissue, bloodvessels, etc., that had enclosed the base of the tumor.

A Well's Clamp was applied as high as the rupture in the vein would permit, and the pedicle cut off two and a half inches above it. The pelvic cavity was now thoroughly cleansed by sponging out every drop of blood and serum, and the incision brought together around the pedicle by six silver wire sutures carried through the whole thickness of the abdominal walls, *including the peritoneum*. The usual compress and bandages were applied, and the patient put to bed at about one o'clock.

Had some nausea and made one or two efforts at vomiting while recovering from the anæsthetic, to be attributed perhaps to the small amount of chloroform administered with the ether. The abdomen was firmly supported during these efforts, and the nausea soon subsided. Some evidences of shock, too, manifested themselves as the anæsthesia wore off, but these soon disappeared under appropriate treatment.

A hypodermic injection of morphia, gr. $\frac{1}{2}$, was administered, and the patient was very soon comfortable.

6.30 P. M. Pulse 80; of good volume; skin warm; drew of *two pints* of healthy urine, showing the free action of the kidneys so

much insisted on by Mr. Spencer Wells. No food was allowed by the stomach, but nutritive enema of beef tea and milk directed to be given every four hours.

Hypodermic injections of morphia were given at intervals to relieve pain.

October 15. Allowed small quantities of milk and beef-tea by stomach; pulse 88; temperature 99° to 100° Fahr.

16th. Patient suffered during latter part of the night with pain and nausea, and vomited some. Vomiting recurred at 1 P. M., and the material ejected from the stomach *looks and smells like stercoraceous matter*.

All food by the stomach was again forbidden, and under the influence of morphia hypodermically, the application of sinapisms to the epigastrium, the internal administration of hydrocyanic acid, champagne and ice, these alarming symptoms disappeared. During the further progress of the case scarcely an unpleasant symptom occurred. Some flatulence of the bowels gave rise to considerable discomfort, relieved by the simple expedient of introducing the detached point of a syringe into the rectum and allowing it to remain, thus permitting large quantities of gas to escape.

Cystitis also developed from the previous existence of cystocele, and the failure to completely empty the bladder, with the repeated introduction of the catheter. Quantities of thick ropy mucus were secreted, completely blocking the eye of the catheter and preventing the flow of urine. This disappeared promptly after washing out the bladder a few times with flaxseed mucilage.

Throughout the whole course of the convalescence, the pulse never exceeded 108, and the temperature never exceeded 101° .

A small abscess formed at the upper side of the pedicle, seemingly parietal, and caused the patient to be confined to bed longer than would have been necessary otherwise, and the highest temperature (101° F. on 23d day) was reached during its formation.

In conclusion, I would say, that, though failing to carry out enucleation in this case, I am impressed with the feasibility and safety of it. Indeed, I am inclined to regard it as the most rational treatment of the pedicle in all cases adapted to it. While it would obviously be less readily accomplished in a simple cyst than in a semi-solid tumor, the failure in this case was due to myself, perhaps, rather than the inherent difficulty in the process, and my experience in this, I believe, would enable me to succeed better in a similar case in the future. I might too have adopted Prof. Miner's suggestion, and applied a metal ligature to the bleeding vein, completed the enucleation, and dropped the whole pedicle back into the abdomen as in any other case, but at the time thought it better to apply the clamp.

January 14, 1876. Mrs. O. called upon me to-day, looking greatly improved in health and rapidly gaining flesh.

A small red granulating tumor as large as a small cherry pro-

jects at the site of the pedicle, and from this *a discharge of blood takes place at each menstruation and continues during the whole of that period.* She is now menstruating for the third time since the operation, and this phenomenon has occurred during each of these periods. Menstruation otherwise normal.—*American Journal Med. Sciences.*

:O:

Editorial.

Foreign Quacks and American Medical Colleges.

By reason of the ready sale which the diplomas of one or two so-called American Medical Colleges realized in Europe, the impression seems to prevail there that the only thing necessary to obtain an American Degree of M. D. is to forward the requisite amount of cash.

The Dean of the Medical Department of the University of Buffalo received, some time since, a letter from a lady practitioner in England, from which we make the following extract :

To the Dean of the Faculty, University of Buffalo:

SIR: I shall feel obliged by your kindly informing me if I can obtain a diploma from your College by passing an examination in England. It appears feasible to me that one or more gentlemen in the profession might be appointed to report upon my education and practical experience in midwifery. It is impossible for me to leave England for a *viva voce* examination, as I should lose the appointments I now hold. I may say that Dr. K——, of Bulstrode street, in London (an examiner at the Apothecaries' Hall, one of the most honored medical institutions in England), and several others, would undertake to examine me, if you do not consider my professional attainments sufficient. The copies of my certificates and testimonials I now enclose. Any of the gentlemen to whom I refer will reply to any enquiries you may deem it expedient to make ; and I shall be happy to remit the fees to any one you may appoint in America.

I should not take the step of thus appealing to your College for assistance, but that the Colleges in England have not as yet afforded us facilities for a free entrance to their examinations, as you will see by the enclosed letter from the Royal College of Surgeons. * * * * * *

In conclusion, may I beg the favor of your informing me if the Faculty of your College confers the degree of Doctor of Medicine, and what would be the amount of fees upon taking up such degree ?

I am, Sir, Yours Obediently,

We do not copy this letter because it is anything rare ; on the contrary, we are sorry to say that such is the reputation, which the disgraceful traffic in medical degrees, by one or two bogus colleges, has entailed upon American Colleges, that the opinion has gained ground abroad that a degree can be obtained on like terms from all. There are few Colleges, we presume, which have not received propositions similar to this.

The lady from whom this letter was received presents some very good credentials, endorsed by men known in America as well as in England. She seems to have attained a very flattering recognition of her talents as a practitioner of midwifery, both in private practice and as attendant to hospitals and dispensaries. Hitherto, however, she has practiced without a diploma, and being unable to obtain one in England, she turns in her anxiety to America to furnish the much-desired parchment. To the above letter Dr. Rochester replied as follows :

MEDICAL DEPARTMENT,
UNIVERSITY OF BUFFALO.
BUFFALO, N. Y., April 5, 1876. }

Mies ————,

MADAM: Your two communications were received a month apart. I have the honor of informing you that the Medical Department of the University of Buffalo confines its degrees to its own matriculants, who have studied medicine for three or more years under its direction, and within its walls, and under no circumstances does it *sell a diploma*.

Your Obt. Servt.,

THOS. F. ROCHESTER,

Dean of the Faculty.

The fact that any medical college should find it necessary to deny that it sells a diploma, is, of itself, a humiliating one to all who have the interest of medical education at heart. We hear yearly more or less of a cry for the advancement of the standard of medical education ; but the cry is generally made by those who know nothing of the difficulties of the task they impose. Prompted more by a feeling of envy and a desire to accomplish the overthrow and discomfiture of those who, by reason of holding professional chairs, have inspired their envy and malice, there are those who cry out against the present low grade, but do nothing to help build it up.

The day is not far distant, we hope, when students will be compelled to *study* medicine for *for three or more years, and within the walls and under the direction* of some medical college ; and not as is now the case, attend a short course of lectures in the winter and teach school or lounge about some doctor's office in the summer. When the medical colleges can take the matter of medical education entirely out of the hands of physicians, and ensure *three or more years* of well-directed study, properly graded, the standard of medical education will be elevated, and not until then. Then the student will have the advantages of

recitations, laboratory work, and complete clinical instruction in hospitals. Now his advantages consist of the use of a few text-books in the office of his preceptor, laboratory work in the way of compounding fever mixtures and making pills, and clinical opportunities in the shape of an occasional case of typhoid fever or a broken arm. Under these circumstances, how can the medical graduates of our colleges be other than what they are? If the material sent by the physicians is crude, the result can be naught but imperfect. If the profession will as a unit support the faculties of our colleges in adopting a graded course, and will discourage any young man from commencing the study of medicine who is not qualified so to do, and who cannot spend the time and money to thoroughly qualify himself for a degree, the elevation of the standard will be an easy task; but if envy and malice are to continually throw obstructions in the path, the task will be of a different nature.

Foreigners are beginning to look with a large degree of interest upon the establishment of graded courses in some of our medical schools. They are looking upon it with interest for the reason that American diplomas have hitherto been easy of attainment by the quacks with which Europe, as well as America, is infested.

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Homœopathy and the Michigan University.

The Regents of the University of Michigan, in establishing Chairs of Homœopathy in that institution, seem to have aroused more of an opposition than they counted on.

To all disinterested parties, the establishment of a Homœopathic College with two professors professing that dogma, the balance of the teaching being done by the regular faculty, makes the old faculty part of the new one also. There seems to us to be but very little difference between the man who teaches anatomy, surgery or obstetrics to the Homœopathic students, and examines and passes them as such, *but does not sign their diplomas*, and the man who does all this in a Homœopathic school, and *does sign the diplomas* as a Homœopathic professor.

The propriety of the State teaching medicine we have always doubted; the manifest impropriety of it the University of Michigan is at present demonstrating to the world. It seems to us no more proper that the State of Michigan, or any other State, should establish a school for instruction in any one theory of medicine than that it should teach one form of religion to the exclusion of all others. If it teaches Presbyterianism or Methodism, the people have a right to demand that it shall teach Catholicism or Spiritualism. So with medicine; the State has no more right to tax its subjects to support a school of regular medicine than it has to support one of Homœopathy, Eclecticism, or any other medical vagary that may spring up.

But there is another side to the question. While the profession cannot demand that the State shall teach regular medicine and nothing else, they can demand that those who have hitherto been honored and respected as exponents of true, scientific medicine, shall not disgrace themselves and the profession to which they belong by lending themselves as assistants to a Homœopathic Faculty in teaching the very branches which Homœopathic professors would otherwise teach. While the Medical Faculty of the University of Michigan are thus under a cloud, the profession can do nothing less than refuse to place pupils under their instruction, and we believe the question is already under discussion whether medical colleges can recognize certificates of attendance upon lectures issued by this Faculty.

We append a letter addressed to the Alumni Association of the Medical Department, University of Michigan, by a number of graduates residing in Toledo, Ohio. The letter plainly exhibits the feeling of the profession upon this subject :

TOLEDO, O., March 23, 1876.

W. F. Breaky, M. D., Secretary Alumni Association, Medical Department, University of Michigan :

DEAR SIR—Believing that a duty is incumbent upon those who have already graduated in the Medical Department of the University, we desire, through you, to express to her Alumni Association our views in regard to the introduction of Homœopathy into that institution.

We, in common with many others, have always referred with pride to the diploma received from the regents of the University, and with corresponding pleasure to the "Honored Faculty" that in those days wrote thereon their names and titles. This evidence of our professional ability we held to be "Armor and Shield." We have watched with eagerness the development of the Medical Department of the University, and her immense power for good in the profession. Her honors were measureably our own, and having shared her glory, in an evil day we must likewise bear a portion of her shame. Our hearts have been bound in bonds of love to her, as well as in duty to the profession to which her gift wedded us. We could, in the fullness of our hearts, forgive much in our *Alma Mater*, but the principles of our profession dictate that love shall never interfere with duty. Our relation to this question is totally non-partisan, and void of all personal feeling. We are free from the local influences that bear upon many others, and care nothing for the adroit logic and language with which it is attempted to cover the startling fact, that a pretended system of medicine, a system which we were then taught to believe, and now conscientiously hold to be, the most arrant attempt at humbuggery, is engrafted upon the institution.

We shudder at the fact that a Faculty in part composed of those whose names appear upon our diplomas, now join hands with those who teach this unblushing charlatanism, by freely giving their students the benefit of additional instruction, thus becoming an organized corps of co-laborers in preparing them to practice a pretended system that not only shames science, but is a byword to simple common sense. When the advocates of *simila similibus curantur*, and the law that the less the dose of a given drug the more powerful it proves to be, flaunt in our faces their diplomas, bearing the same name and seal as our own, we can but estimate the value of ours, obtained when her name was without stain, as very sadly depreciated. Words of reproach we have none, and our sentiments are only those of sorrow. Our *Alma Mater* is smitten with a loathsome disease. We hope that its fatality may be averted, and to this end respectfully express our belief and feelings that the alliance should not be continued, that at all hazards the purity of medical teachings should there be maintained ; that, come the very worst, we enter our earnest and solemn protest against the teaching of Homœ-

opathy, or even its tacit recognition in the Medical Department of the University of Michigan. Very respectfully, &c.,

[Signed],

J. T. WOODS, M. D., Class of 1855.
 GRO. W. BOWEN, M. D., Class of 1860
 J. F. ARIS, M. D., Class of 1865,
 JAS. A. DUNCAN, M. D., Class of 1871.
 EDWARD M. HALL, M. D., Class of 1873.
 JAS. T. LAWLESS, M. D., Class of 1872.
 A. J. BOSTATER, M. D., Class of 1871.
 C. R. HUME, M. D., Class of 1874.

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Books Reviewed.

A Treatise on the Diseases of Infancy and Childhood. By J. LEWIS SMITH, M. D. Third Edition. Enlarged and thoroughly Revised. Philadelphia: Henry C. Lea. 1876. Buffalo: T. Butler & Son.

The urgent call for the third edition of Dr. Smith's excellent work is ample evidence that it is a favorite with the profession. In the present revised, enlarged and illustrated edition it will be found that several chapters have undergone more or less important modifications and changes. The chapter on diphtheria has, owing to the author's increased experience in that disease, been modified in several particulars. He does not agree with Oertel, and other German writers, in attaching great significance to the presence of micrococci in the false membrane of this affection.

Dr. Smith describes for the first time in an English text-book, we believe, what is known as Rothlen, or German measles. He also devotes a chapter to cerebro-spinal fever, which he considers as a general disease, the pathological changes of which are not, in a large number of cases, to be found in the brain or spinal cord. The text has been so arranged, and the size of the type so modified, that, notwithstanding a large amount of additional matter, the work is the same size as the former edition. It can safely be said that it is one of the best text-books in the English language on diseases of children.

The Archives of Dermatology: A Quarterly Journal of Skin and Venereal Diseases. Edited by L. DUNCAN BULKLEY, A. M., M. D. Volume First. New York: G. P. Putnam's Sons. 1875.

The first number of this journal appeared in October, 1874, under the able editorial charge of Dr. L. D. Bulkley, who as a writer on skin diseases has a wide

reputation. The "*Archives*," the editor tells us in the first number, will be prepared with a view of meeting the wants of the general practitioner. Its general character will be a practical one. This promise has been well carried out in the first volume, and there is excellent promise of its further fulfilment in the second.

The subject matter of each issue is arranged under the following heads: Original Communications, Transactions of the New York Dermatological Society, Clinical Reports, Extracts and Translations, Digest of Dermatological Literature, Reviews and Book Notices, Correspondence and Miscellanies. Each of these departments is well supported. The Digest of Dermatological Literature is quite comprehensive in its scope, embracing more than would be supposed by those who have not had an opportunity of consulting its pages. In the number for April, 1875, for instance, we notice in the Digest, under Skin Diseases, considerations concerning their anatomy, physiology and pathology, acute and contagious inflammations, hypertrophies, atrophies and new formations, hemorrhages and neuroses; under Syphilis and Venereal Diseases, general questions in syphilis, nervous and visceral syphilis, and syphilis of the mouth, throat and larynx. Under each of the above heads a large number of articles, both American and foreign are referred to either by title simply, or *in extenso*, and the volume forms almost a complete bibliography of these subjects for the year.

We congratulate Dr. Bulkley and his co-workers and wish them continued success.

Extra-Uterine Pregnancy: its Causes, Species, Pathological Anatomy, Prognosis and Treatment. By JOHN S. PARRY, M. D. Philadelphia: Henry C. Lea. 1876. Buffalo: T. Butler & Son.

This work is based on an analysis of five hundred cases of extra-uterine pregnancy, collected from the reports of various authors.

The author says that the cause in many instances cannot be determined. Among the causes which have been recognized as producing a misplaced pregnancy he places the results of previous pelvic disease: constriction and displacement of the uterine appendages. Inaptitude to conception, hernia of the internal genital organs, displacements and tumors of the uterus, operations on the uterus, moral and emotional causes, twin conceptions, diseases and deranged action of the fallopian tubes, age and the number of the pregnancy are also cited as causes of extra-uterine pregnancy. In reference to operations upon the uterus, the author cites two somewhat remarkable cases. One which was observed by M. Kœberle is as follows: This surgeon removed all the body and part of the neck of the uterus on account of a fibroid tumor. The appendages of the uterus were left. The patient recovered with a fistula through the cicatrix of the neck by which she became pregnant. She went to term and died unde-livered.

Of the varieties of extra-uterine pregnancy, the author recognizes but three: tubal, ovarian and ventral or abdominal. Each of these he divides into several classes.

In the establishment of the connection between the ovum and its abnormal location, but one force is concerned. This is a vital adhesion between the villi of the chorion and the tissue with which they come in contact, aided by the presence of more or less plastic material. It differs from the same process in the uterus in the absence of the decidua, the subovular portion of which—called the serotina—plays an important part in establishing a connection between the ovular and maternal tissues by means of the active proliferation of its cells.

In regard to the uterus, it seems that it undergoes changes nearly similar to those which are observed in the normal gestations. The author lays down the following propositions: 1. In all varieties of extra-uterine pregnancy a decidua forms in the uterine cavity, as in normal gestation, but none surrounds the ovum. 2. The decidua is rarely retained until the completion of gestation, and thrown off during false labor. More frequently, if the patient goes to term, it is discharged during the early periods of pregnancy in small fragments, and without producing pain; or else it is expelled *en masse* with symptoms of miscarriage. 3. The absence of a uterine decidua when death has occurred from rupture of the cyst, even in the early stages of pregnancy, is not proof that the membrane has not been formed, but simply that it has been expelled before the death of the patient.

The symptoms of extra-uterine pregnancy are all carefully studied, and are divided into those evinced at three periods. 1. Those at the beginning of the pregnancy, when the foetal heart cannot be heard. 2. After the period when the foetal heart is audible, and until after the close of the spurious labor, or at term. 3. After the termination of the false labor, or the death of the foetus.

In the termination of a case of this character there are three conditions which the author describes: Rupture of the cyst, changes which follow retention of the foetus for a long period, and discharge of the child through the bowel, bladder, vagina or abdominal wall. Of the five hundred cases which the author has collected, three hundred and thirty-six proved fatal—a death rate of over sixty-seven per cent.

The various procedures which have been adopted in these cases are considered in detail. The author believes it to be the duty of the attendant, in cases of this character, where there is unmistakable evidence of rupture of the cyst, to open the abdominal cavity and remove the contents of the ruptured cyst, thus attempting to save the patient.

This work is one of extreme value, and shows evidence of a large amount of patient work. We are only sorry the author could not have been spared to reap some of the results of his labors.

Books and Pamphlets Received.

A Treatise on Diseases of the Nervous System. By William A. Hammond, M. D., etc. Sixth edition, enlarged and improved. New York: D. Appleton & Co. 1876. Buffalo: Herger & Ulbrich.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. Von Ziemssen. Vol. IV. Diseases of the Respiratory Organs. Albert H. Buck, M. D., American Editor. New York: Wm. Wood & Co. 1876,

A Series of American Clinical Lectures. Edited by E. C. Seguin, M. D. Vol. II, No. 2. On Certain Forms of Morbid Nervous Sensibility. By J. S. Jewell, M. D. New York: G. P. Putman's Sons.

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New Publications.

Messrs. J. H. Coates & Co., 822 Chestnut St., Philadelphia, Pa., announce a new monthly to be conducted by Carl Seiler, M. D., in conjunction with J. G. Hunt, M. D. and Joseph G. Richardson, M. D. The title of the publication will be Micro-Photographs in Histology, Normal and Pathological.

The object of this work is to replace, as far as possible, the microscope for those physicians who have neither the time nor opportunity to make observations with the instrument for themselves, and also to furnish microscopists for comparison, correct representations of typical specimens in domain of normal and pathological histology. Each number will contain at least four plates with descriptive letter press. The numbers will be sold at sixty cents each, or at \$6.00 per volume of twelve numbers.—The Archives of Clinical Surgery is announced shortly to appear in New York. Several of the best lecturers upon Surgery in New York and elsewhere will contribute to its pages.

B U F F A L O

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Original Communications.

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ART. I.—*Physiological Considerations in Transfusion of Blood.*
By C. GEORGE, M. D., Ann Arbor, Mich.

Transfusion, apparently a new remedy, has already passed its second centennial. Hailed with great enthusiasm when first introduced, it soon shared the fate of all new remedies whose praise is solely due to empirical knowledge derived from their history in a few cases. It so came into disfavor that it was forbidden in practice by law, and thus it passed for a time into utter oblivion to be resuscitated by modern physicians. Now at the dawn of a new career it is again blessed with the empirical praise of physicians and surgeons, while the voice of the physiologist is almost unheeded. Although the knowledge of the therapeutical indications of a remedy derived from empirical practice is not to be ignored, yet it is equally true that inductive knowledge of such indications derived from experimental investigations should at least be regarded with equal candor.

The questions at issue pertain to the therapeutical indications, and the kind of blood to be used—here we find the voice of empiricism in favor of using it almost promiscuously, and of employing any kind of blood, alkaline solutions, milk, etc., while the

physiologist demands human blood and that for certain specific indications only.

I propose to render a resumé of the views of the physiologists of the day in regard to these vital questions.

While it is generally conceded that the blood takes up oxygen as oxyhæmaglobin in its passage through the lungs, and that it is the carrier of nutritive elements derived in part directly from the stomach and intestines and indirectly through the thoracic duct, that it again in turn relieves the tissues from effete materials by conveying these substances to the excretory glands; it is still held by some physicians that the blood is more than a ready vehicle for oxygen and nutritive elements in their passage to the tissues and for effete material in its passage to the excretories, that it serves also as a direct nourishment through the albuminoids contained in the corpuscles and plasma in case that the requisite supply is not furnished by the proper organs. This view was derived from an observation of Bidder and Schmidt, who observed that the diminution of the blood, in quantity and quality, of a starved animal was greater than that of the body and at once concluded from this single observation that the blood served as nourishment. This opinion has exercised great influence on the therapeutical application of transfusion in the past and has not yet lost all sway. In conformity with this view, patients lying in the last stages of consumption have been, and are still treated with transfusion in the vain hope of enlivening the system with healthy blood. It is further practiced in various forms of chronic anæmia caused by incurable disease of the nutritive organs, and anæmia caused by fevers, etc.

Recent investigations by Panum have demonstrated the fallacy of this doctrine beyond the limits of reasonable doubt. (*Virchow's Archiv.*) His experiments are fully corroborated by those of Ponfick and Mittler. All recent investigators have come to the conclusion that in inanition the red corpuscles of the blood do not diminish more in proportion than the body itself, that transfusion will only increase the relative diminution of the weight of the body on account of the increased amount of oxygen required for the transfused blood; that the amount of fibrine is

not diminished, that it is soon reproduced to the original amount if depletion precedes transfusion of defibrinated blood in independent of the presence of inflammatory processes; and finally that the albuminoids diminish somewhat in amount, yet this diminution is not constantly observed; and that the relative amount of diminution is so slight, when it does take place, as to prove efficiently that the albuminoids are not consumed by the tissues.

The physiological action of albuminoids, however, is as yet but very imperfectly understood. It is probable that they are the carriers of water. There are at least three different kinds of albuminoids, viz.: fibrine which separates readily on coagulation, serum casein, which is obtained after removing the fibrine by diluting and neutralizing the serum, and lastly serum albumen, which remains after removing the two former varieties, and is freed by boiling, alcohol, &c. It is thought that the serum albumen is the vehicle for the circulating water and the salts in solution in the plasma, and that the serum casein, which is probably produced by the corpuscles, serves as immediate nourishment i. e. as material for reproduction. Fibrine is probably produced outside the vessels as a secondary product during cell formation and serves probably as material for certain secretions. This view is fully sustained by the fact that in all inflammatory processes the amount of fibrine is not diminished, but augmented as long as the inflammation is accompanied by increased cell production. The fact that the relative amount of fibrine is not diminished during inanition unaccompanied by inflammatory action, is still further support for the above theory.

Next in order we shall consider the part performed by the individual constituents of the blood in the respiratory process. The serum and plasma of the blood absorb as much oxygen as water, under equal pressure of temperature, i. e., 2-3 per cent. by volume. Hæmaglobine, an essential constituent of the red corpuscle unites chemically with oxygen, forming oxyhæmaglobine. The amount of oxygen which the blood is thus capable of absorbing depends chiefly on the number of red corpuscles, respectively on the amount of hæmaglobine which it contains. This process does not depend on either pressure or temperature. Oxyhæmaglobine is

readily decomposed by carbonic acid gas on account of the greater affinity of this substance for the oxygen than the hæmaglobine. The tissues receive their requisite supply of oxygen during the passage of the blood through the capillaries. Arterial blood is normally saturated with oxygen and this is still the case when the respired air contains only one-half the usual amount of oxygen, and again hæmaglobine does not combine with more oxygen, even if pure oxygen is respired, nor is the amount of oxygen consumed in twenty-four hours increased by inhaling pure oxygen. Respiration first becomes impaired when the oxygen in the respired air is reduced to one-third that of the usual quantity and suffocation is readily induced by air containing only from 3-5 per cent. by volume. Freed hæmaglobine takes no share in the respiratory process, it is a foreign substance and is carried off by the kidneys. Venous blood contains about 5 per cent. by volume less of oxygen than arterial blood, which consequently represents the amount of oxygen received by the tissues. Hence venous blood contains a comparatively large amount of dispensable oxygen and it first loses all traces of it when death has been caused by complete occlusion of the respiratory passages. In such cases we scarcely find a trace of oxygen in the air of the respiratory passages.

Carbonic acid is carried off by the water and salts of the plasma and particularly the alkaline carbonates and phosphates. Arterial blood is not free from carbonic acid, but contains usually from 26-30 per cent. by volume, whilst venous blood contains from 2-6 vol. more, this then is the amount taken from the tissues. The amount of carbonic acid found in the blood when death has been caused by suffocation, never exceeds 53 per cent. by volume. Venous blood is never saturated with carbonic acid, it can take under the usual barometric pressure and medium temperature from 150-180 per cent. by volume whilst water under the same conditions takes only about 100 per cent. by volume. The amount of carbonic acid, however, is increased when a mixture of carbonic acid and oxygen is inhaled, as is the case when an animal is subjected to such a mixture in a hermetically sealed reservoir. Death when thus produced differs essentially from that caused by the occlusion of the respiratory tract, this is car-

bonic acid poisoning, which is not accompanied by convulsions.

The amount of carbonic acid exhaled by the lungs is free, i. e., simply absorbed by the water ; another part which is held chemically as sesqui and bicarbonates, is liberated by boiling in air-tight covers, and the residue is combined as carbonates. Oxyhæmaglobine acts as an acid on the carbonates, liberating a greater part of CO₂ held loosely as bicarbonates, and also part of that held by the carbonates.

In defibrinated blood the red corpuscles have not lost the property of combining with oxygen, while the serum and its salts still absorb carbonic acid, and if left standing it yields oxygen and absorbs carbonic acid precisely like the original fluid. Defibrinated venous blood is for all practical purposes identical with defibrinated arterial blood ; should carbonic acid predominate it can easily be expelled by stirring the fluid rapidly in contact with pure air, when it will at once assume the bright scarlet color of fresh arterial blood. Defibrinated blood can be preserved for at least 24 hours in an air-tight vessel secured in ice. Blood thus preserved has simply to be raised to the normal temperature and saturated with oxygen before being employed.

There is a marked difference in the amount of oxygen which defibrinated blood is capable of absorbing, this depends entirely on number of corpuscles removed by the defibrinating process. That defibrinated blood is capable of performing all the functions of the vital fluid has been amply demonstrated by the experiments of Panum and Ponfick. These investigators subjected dogs to repeated depletions and transfusions of similar defibrinated blood until there could scarcely have been left more than a trace of the original blood, the dogs appeared active and lively during these experiments and when finally killed the amount of fibrine was only slightly in arrear of the original amount. These experiments were not accompanied by inflammatory action.

To sum up—the red corpuscles by virtue of their hæmaglobine take up oxygen and convey it to the tissues, the water of the plasma is the vehicle for the nutritive elements and salts and conveys the carbonic acid and other products of waste to the proper emuncto-

ries. It seems also that it is the function of the albuminoids contained in the plasma to absorb and retain water, being thus the chief vehicle for the water received during alimentation and also for that excreted by the kidneys, skin, etc.

Grave complications, so frequently observed after the introduction of large quantities of blood have heretofore been attributed to the sudden increase of arterial pressure. This doctrine has had a grave influence on the therapeutics of transfusion,—it has induced practitioners to deplete before transfusing.

M. Herman has demonstrated that spring or distilled water can not be used for transfusion because it dissolves a proportionate amount of red corpuscles. Ponfick did not observe grave symptoms following alkaline solutions even in large quantities when the experiment was conducted slowly. By using an artificial serum (1 p. ct. Na. Cl. and albumen of egg.) in large quantities he observed slight depression, which, however, subsided shortly after relieving the animals. The urine was always peculiarly affected, the kidneys did not manifest any symptoms indicative of augmented arterial pressure, the amount of urine was not perceptibly increased; its sp. gr. however was greatly reduced, had an alkaline reaction and contained large quantities of albumen of a foreign variety, deficient in urea. The alkaline reaction subsides with the disappearance of the albumen, simultaneously with these changes the urea increases in amount and the sp. gr. rises to its original height. The increased pressure of the vascular system however could not have been reduced by the exhalations of the skin, or discharges of the bowels, for both were very slight. In these experiments Ponfick did not observe the bloody exudations of former authors; they have to be attributed to other causes than augmentation of pressure.

Ponfick obtained very different results with natural serum; urine remains acid, sp. g. not affected, amount passed almost unaltered, no trace of albumen. These results are corroborated by the experiments of Stockvis, Leman and Worm-Mueller.

Worm-Mueller in his experiments observed a considerable increase of pressure at the carotids immediately after the operation, subsiding, however, soon afterwards. He sums up his result as follows: "It is highly probable that the vascular system can accom-

moderate itself within certain limits to larger or smaller quantities of blood without giving rise to material change in pressure or abnormal dilatation of the walls of the vessels, or any serious symptoms whatever." He attributes this function of adaptation of the vascular system to the influence of the vaso motor nervous system.

The danger of inducing an acute plethora by transfusion has thus been decidedly overestimated, the symptoms solely due to it are far too insignificant to warrant the heroic procedure of previous depletion; and these very symptoms may follow a preceding depletion if the transfusion is conducted too rapidly. Depletion however might be practiced with benefit if we could demonstrate with certainty that the corpuscles are undergoing disintegration, as in carbonic acid gas poisoning, in such cases the corpuscles are worse than useless.

Transfusions with similar defibrinated blood are not followed by any abnormal symptoms, contrarily when preceded by depletion they produce augmented animation. The amount of urine is not increased, color, spec. grav. and reaction remain normal, no trace of albumen detected. Direct transfusions with similar blood do not materially differ from those of defibrinated blood if no coagula are injected.

Transfusions with different kinds of blood, whether defibrinated or not, have had very different results from the above in the hands of all modern investigators.

Dyspnœa ensues rapidly as the operation progresses, manifested at first by increased frequency of respiration, it is soon accompanied by convulsive movements of the diaphragm and later by general convulsions. These symptoms are accompanied by frequent stools and severe vomiting which in time give place to tenesmus and intense nausea. There is complete suppression of urine and hæmaglobinurea is quickly announced by the appearance of a few bright red drops of dissolved hæmaglobine and cylinders, scales, etc., (catheter is always used). Depression follows rapidly, the respiratory movements become superficial and less frequent and all the muscles of the body relaxed. The released animals lie in a state of apathy and gloomy silence, broken from time to time by faint dismal groans until death terminates the scene. In section

the mucous membrane of the stomach duodenum and of the entire ileum is found of dark red color, greatly swollen and covered by a thick reddish mucus. The villi are swollen and indistinct, no discrete bloody effusions in their tissue. The same condition continues in increased intensity to the colon and reaches its height in the sigmoid flexure. Numerous hemorrhages in the mucous membrane. Rectum is similarly affected. The kidneys however contain the chief lesions caused by dissimilar blood, when enough is injected to produce any pathological condition whatever. They are greatly swollen, but not always infiltrated with blood; on the contrary the texture, particularly towards the periphery, appears frequently very pale of dirty greyish brown color. The capsule peels off readily and numerous sharply bordered spots and stripes of a reddish or coffee brown color are seen imbedded in the smooth distended surface of the peculiar brownish ground-texture of the organ. The appearance as well as the distribution of these spots and stripes reminds one of the multiple spots of hæmorrhagic nephritis. On section they appear in great numbers at the periphery, but less sharply contoured from the surrounding parenchyma, which is greatly swollen, very pale and of uniform color. Ferrein's pyramids render the inner half of a coarsely striated appearance. The Malpighian bodies appear shrunken on account of the slight amount of blood they contain. The papillæ (Markkegel) are very large and bloody toward the periphery, and the brown and red stripes radiating towards them alternate regularly. In severe cases the brownish color is so predominant that the reddish lines can scarcely be recognized. A dark brown or light colored fluid exudes from the papillæ on pressure in which small bodies are distinctly seen suspended. A similar fluid varying in amount is found in the pelvis of the kidneys and bladder. Fatal cases are characterized by absolute emptiness of the urinary reservoirs. The adipose tissue of the hilus is frequently remarkably œdematous.

Microscopical investigation has shown that all the brown spots and stripes in the cortical substance and the radiating lines in the pyramids are caused by solid plugs in the tubuli uriniferi. The color of these cylinders corresponds at first, exactly with the red corpuscles; in the latter stages it assumes a darker and brownish

tint. This does not depend on the presence of colored cells in the tubuli but on an imbibition of either a hyaline or corpuscular substance and hæmaglobine.

Bloody transudations in the stomach and intestinal tract have indeed also been observed to follow transfusions with similar blood, yet these have to be attributed to very different factors, for they do not always appear nor are they permanent in character. In direct transfusion with similar blood we must take into consideration the great danger of introducing small coagula, or of transfusing the blood too rapidly; either of these factors is capable of producing all the above symptoms,—in transfusing defibrinated blood he must bear in mind that it is an easy matter to leave small particles of coagulated fibrine behind or of contaminating the blood otherwise. There is also great danger of introducing air with the frequent introduction of the syringe. Transfusions with similar blood have been performed without giving rise to any symptoms otherwise than those indicative of heightened animation. Transfusions with dissimilar blood whether defibrinated or not have always given rise to grave symptoms and the gravity depended on the amount introduced; and there is one grand factor which distinguishes the whole train of symptoms which may follow transfusions of similar blood from those which constantly follow transfusions of dissimilar blood, i. e. in the former the urine does not present any changes indicative of either kidney disease or destruction of the red corpuscles, whereas in the latter the urine always shows the peculiar action of dissimilar blood, and finally death may be caused by dissimilar blood without giving rise to those affections of the stomach and intestines which are the chief lesions observed after transfusions with similar blood.

Ponfick has demonstrated by chemical, microscopic and spectroscopic examination that the reddish color of the urine does not depend on the presence of red corpuscles but on loose hæmaglobine. Whenever he found red corpuscles he readily accounts for them by the very frequent catheterism to which the animals were subjected. The urine also contains brownish cylinders, the tubuli uriniferi. During the presence of the hæmaglobine urine had an alkaline reaction and of low sp. gr. Thus we see an unmistakable antagonism

between the exudation of the hæmaglobine and the normal action of the kidneys, the normal constituent of the urine being conspicuously absent during the presence of the hæmaglobine, and first reappearing a few hours after the last traces of hæmaglobine have disappeared. The quantity of hæmaglobine, the number of cylinders and the degree of reduction of sp. grav. stand in direct relation to the amount of dissimilar blood used for transfusion.

It is regarded by physiologists as a certainty that the hæmaglobine comes from the corpuscles of the foreign blood, that all dissimilar corpuscles undergo disintegration, and that they dare not take part in the respiratory process. When transfusions of such small quantities of dissimilar blood as do not produce hæmaglobinurea are repeated at comparatively short intervals the combined effect will appear as soon as such a quantity has been transfused as would produce hæmaglobinurea if injected at once.

The appearance of hæmaglobinurea is the beginning of the end—if the quantity of hæmaglobin excreted by the kidneys is so slight that it does not materially disturb the function of these organs then the victim will survive, but should the quantity be so great as to block up and destroy great number of tubules at once then death must inevitably terminate the scene.

Prevost and Dumas state that all dissimilar blood has a poisonous effect. Ponfick, Panum, Mittler and Landois have corroborated this statement so far in demonstrating experimentally that the blood of the following animals, viz: lamb, hog, calf, cat, also that of hen, rabbit and duck, etc., had a poisonous effect on the dog. Ponfick also proved that human blood had the same effect on the dog, so man cannot be regarded an exception to this physiological law and patients have actually expired immediately after lamb blood transfusions who, in all human probability, would have lived.*

In conclusion, it seems hardly necessary to state that transfusion is, as far as known at present, only indicated in cases of severe and fatal hemorrhage, that human blood alone will serve the purpose and that defibrinated blood has the advantage in being capable of performing all the functions of the vital fluid without endangering the system through coagula so readily produced in transfusions with original blood.

* See Denis' Lamb blood transfusion.

ART. II.—*Medical Society of the County of Albany.* Semi-monthly meeting Feb. 23d, 1876.

Dr. Henry March, President, in the chair. Dr. F. C. Curtis reported a case of Leucocythemia. The following is an abstract:

D. W., aged 30, native of this county, and by occupation a curer of fish. Had always been healthy in general; when young had rheumatism; had been in a malarious region fifteen or twenty years ago, but had not been affected by it. Began about four years ago to have night sweats without accompanying symptoms—often very profuse, and little affected by treatment. A year ago began to feel dull pain in the left side in region of spleen. A few months later the side was protruding, and examination showed the spleen greatly enlarged, reaching to the median line. There was little change in the symptoms excepting a degree of progressive weakness until last July, when for a time he experienced great dizziness. In October profuse diarrhœa set in, which lasted till death. This appeared to have the effect to reduce the size of the spleen, as it diminished greatly. He had dyspnœa and symptoms of heart weakening, which at one time were very urgent. There was congestion of the lungs and a mitral systolic murmur. Thrombosis of popliteal vein occurred on left side, and not long after on right. Examination of the blood showed a large excess of white globules. He began finally to grow stronger although the diarrhœa still continued, no effort being made to check it, as tympanitis and distress always ensued, and he finally was able to sit up most of the day. Cod-liver oil and bitter tonics comprised the treatment. Iron was not borne. For several weeks he appeared to be improving in all respects, when pleurisy set in, and he died ten days after. Post mortem examination showed a spleen having a size of 10 inches by $7\frac{1}{2}$ by 5. The liver was also much enlarged and apparently fatty. Kidneys large. The right pleura was filled completely with serum. The blood was clotted, some of the clots being colorless, but most of the blood having a mahogany color. A point of chief interest in the case is the rapid and permanent reduction of the spleen in size after profuse diarrhœa set in, and also the benefit evidently following the use of cod-liver oil in building him up and possibly affecting his disease specifically.

Dr. Hannon said he thought Leucocythemia a very questionable disease. He would ask three questions: where the white corpuscles were made, how they got into the circulation, and how they destroyed the red globules?

Dr. Curtis said that if the origin of the white globules was a point at issue, it is held by many that the spleen is their starting point, and from these they pass into the circulation, He did not think that they destroyed the red globules.

Dr. Munson asked if there was any difference in the size of the leucocytes, as compared to the normal size, and also if the sight was interfered with.

Dr. Curtis said that he did not know if there was any difference in the size. The sight was not impaired.

Dr. Hannon enquired what caused death?

Dr. Curtis said that he did not understand the question. The white corpuscles destroy life by not being able to support it. The red globules are the life-supporting ones.

Dr. Hannon asked if the enlarged spleen might not have originated from miasm?

Dr. Curtis said that did not constitute Leucocythemia.

Dr. Munson said he thought it an interesting fact that Leucocytes did not emigrate into other tissues, but remained in the blood.

Dr. James S. Bailey remarked that he was much interested in the case and in the post mortem appearances. He saw enough to account for death. This was the second case reported before the society since its organization. Dr. Myron Davis had reported one case seven years before. In regard to the size of the spleen he thought Dr. Van Derveer had one in his office which was larger.

Dr. J. M. Bigelow reported a case of tobacco poisoning. He said: August 28th, 1875, I was hastily summoned to attend Mr. T. S., aged 26, clerk, single, who had been suddenly seized with a convulsion while walking with a friend on the street. He was stricken without premonition, and was conveyed to a neighboring store, where I first saw him. His skin was very pallid and presented an anæmic appearance; his features were pinched and contracted; his pulse was irregular; for a few seconds it was very

rapid, then quite slow and labored; sometimes thready and hurried, at others retarded and intermittent. At one time the pulse counted 136 to the minute, and in a short time thereafter sank to 38 per minute. His heart beat very irregularly; this was evinced by palpitative, tremulous motion of the organ, especially when lying upon the left side. The sounds of the heart were muffled, and seemed to almost run into each other, indicating that variety of irritable heart recently mentioned by Dr. Adams in the *Lancet*. The temperature ranged from 98° to 99.5° F. His lips were pale and bloodless; eyes staring; pupils dilated. He complained of great pain and distress in the left side of the chest, especially around the precordial region. Suffered great dyspnœa, drew long sighs, made a gulping effort at emesis, had hiccough, and cold perspiration, and presented great physical and nervous prostration. These symptoms were rapidly succeeded by clonic convulsions, which produced great muscular agitation, particularly of the extremities. The teeth were shut together, hands tightly clinched; the legs flexed and extended in rapid alternation. With the cessation of these spasms, the patient complained of anesthesia, more or less complete, especially of the left side of the extremities and of the tip of the tongue; also spoke of excessive languor and nervous tremor.

These convulsions were not attended by any loss of consciousness, for in their cessation he would repeat our conversation and assure us that although he knew what was occurring near and around him, yet he was powerless to help himself or to control the excessive muscular perturbations. It was during the first visit that I noticed, after the transit of the convulsions, a cataleptic condition of the arms and legs. If a leg or arm was extended or flexed or uplifted, it would retain that position for at least five minutes, or until it was reduced to a more comfortable position. This condition passed off and was succeeded almost immediately by hysteric tremors, convulsive twitchings of the flexor muscles of the whole body, accompanied by an agonized apprehension of some rapidly approaching physical catastrophe, the result of which would be death. He would clutch the arm of any by-stander and beseech him to save his life, to relieve him from the great precor-

dial distress and threatening suffocation. This fear was in some subsequent attacks the cause of prolonged mental and bodily excitement. Conversation, rapid walking or any violent motion of the attendants would provoke these spasmodic attacks and produce great nervous irritability. His disposition, from that of amiable, became fretful and peevish. At the time of the first attack there was administered hypodermically gr. $\frac{1}{4}$ sulph. morphia and prescribed.

R. Bromide Potass. gr. x.
 Ammon. Carb. gr. v.
 Aquæ $\frac{3}{4}$ ii.

Repeat every two hours. He was removed to his home when I saw him again on the 29th of August. On careful enquiry I learned that this attack was the third within a year, each attack occurring at the commencement of each six months. Mr. S. had smoked tobacco since he was twelve years of age, some days using as many as ten cigars, and often substituted for luncheon three or four strong ones. He had little or no appetite most of the time; was pale and cadaverous, languid and weak; ate but little and at irregular hours; but from his rise in the morning to his retirement at night, he was never without his "weed." He was restless; would start and jump in his sleep; had become very irritable in his disposition, and greatly enfeebled. A searching scrutiny of his family history failed to elicit any trace of epilepsy or other nervous disorder, and with regard to himself, he denied any other sickness than the present. The above treatment was continued until the 1st of September, when a tonic of the elixir Ferri Strych. et Quin. $\frac{3}{4}$ i after meals and Pot. Bromide gr. xv at bedtime were prescribed. He had resumed his occupation and had so much improved that I ceased visiting him, after leaving some directions about his diet and general health and interdicting tobacco in any form. I left him not altogether clear in my mind as to the cause of the singular symptoms he had presented. On September 5th, 1875, I was again summoned to him. He was under the influence of the "worst fit he had ever had," as the messenger said. On arrival at the house of the friend he was visiting, I found him reclining on the lounge, presenting the appearance in speech and looks of an

acute maniac. At one moment, seizing his friends, he would implore them to save him from some indescribable "something," which was stifling him; the next moment he fell into the most violent convulsions I have ever witnessed. He presented the same symptoms in rapid succession as have been previously narrated, excepting that his fear of death had become a mania. On enquiry I found that he had been quite fretful for a day or two previous, neglecting his meals, and smoked from eight to ten cigars daily. I prescribed,

- R. Ammonia,
Quinia,
Zinci Valerianatis aa gr. j,
Simple Syrup dr. i, to be given every three hours,
- R. Pot. Bromide gr. x,
Tr. Aromat Comp. dr. i,
Simple Syrup dr. ij, to be given every six hours.

On the 6th of September he was much better, but still suffered severely from hysteric and ataxic tremors of the limbs and arms; also complained of great distress in the cardiac region which would occasionally precipitate a transient convulsive agitation of the whole body. He could hardly sit upright; called my attention to the great numbness of the extremities and of the tongue; he felt cold and chilly. Continued the same treatment. On the 7th he had so far improved as to be able to sit up in an easy chair; slept well and had no return of the spells for some four hours. On the 8th Dr. Howe was called in consultation, and confirmed the diagnosis of Tobacco Poisoning, and the treatment as given. From this time onward preparations of Strych. and Iron, good diet, fresh air and moderate exercise were enjoined. Also Pot. Bromide in gr. x doses twice daily in combination with Tr. Aromat Comp. 3i doses. On the 11th he went into the country, and returned on the 30th, fully restored in health, and better than he had been for years. Since that time, on three occasions, he has smoked from four to six cigars in succession, followed by a return, with greater or less violence, of the symptoms. He has since given up entirely the use of tobacco, and now enjoys the best of health.

Connected with the above example of the evil effects of the abuse of tobacco, it may be interesting to note a few other results which have been mentioned as attendants of tobacco poisoning.

Owing to the enormous consumption of tobacco in France and the alarming increase of nervous disorders in the empire, Napoleon, in 1861, called the attention of the Academy of Medicine at Paris to the subject. A scientific statician, with an imperial commission, was empowered to collect facts and data for a report. The result showed that whereas the annual tobacco tax from 1812 to 1862 was 28,000,000 francs, and that in the hospital there were 8,000 paralytics and insane, in 1862 the tax had risen to 180,000,000 francs and the number in the hospitals increased to 40,000 paralytics and insane. A commission was then appointed to enquire into the influence of tobacco on the human system. The report stated that a large number of the diseases of the nervous system and of the heart noticed in the cases of those affected with paralysis or insanity were regarded as the sequence of excessive indulgence in the use of tobacco. M. Jolly said that "Tobacco seems primarily to act upon the organic nervous system, depressing its functions, such as the nutrition of the body, circulation of the blood, and the number of the red corpuscles in the blood." He further states that "tobacco produces weakness of the brain and spinal marrow." Attention was also called to the bad digestion, benumbed intelligence and clouded memory of those who used tobacco to excess." Dr. Occaisue reports that "in twenty-two out of thirty-three case of tobacco smokers there were injurious disorders of the circulation, 'bruit de souffle' in the neck, palpitation, disorders of digestion, cloudiness of intellect, &c. In a majority of cases there was diminution of the red corpuscles of the blood and epistaxis, disturbed sleep and vertigo." Dr. B. W. Richardson observes "that smoking produces disturbance of the blood of the stomach, heart and brain, of the organs of sense, and of the nervous filaments of the sympathetic and organic nerves." Again he states that "tobacco smoking arrest oxygenation of the blood, and thus interferes with the full development of the structures of the body, especially in the young." Dr. Hutchinson, of London, also mentions Amaurosis. Dr. Derby, Assistant to Prof. Von Graffe, notes color blindness as an occasional sequence to tobacco smoking.

Whether the convulsions we have noticed are due to Anæmia of the brain and of the blood, or the result of more or less perma-

nent derangement of the organic system of nerves, is a question of vital interest to all admirers of the fragrant Havana.

Dr. Stonehouse said he had seen one case of acute mania which was produced by excessive tobacco smoking. The patient recovered on quitting its use.

Dr. Hannon said he did not think tobacco had a stupefying effect on the mental faculties, for some of the finest literary efforts have been brought forth after considerable smoking.

Dr. James S. Bailey said that he had experienced something of the evil effects of the weed, but to such an extent as spoken of in Dr. Bigelow's paper. He was happy to say that he used it no longer.

Adjourned.

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ART. III.—*Operative Treatment of Pleuritic Effusions (Serous).*

By HERMAN MYNTER, M. D. *

The theme I shall take the liberty of presenting to you this evening, and which I hope will be of some interest to you, although it may not offer anything new, is the operative treatment of the serous pleurisies. I have chosen this subject partly because I have a case to report, treated in this way, and partly because I am inclined to perform the operation at an earlier period than has been the custom, and believe that an early thoracentesis not only is allowed, but also from a pathologico-anatomical point of view is advisable.

I do not mention here the purulent pleurisies, empyema, because I am of the opinion that all agree to evacuate the matter here as soon as possible and only disagree as to the methods of doing it, although most physicians prefer a free incision.

An acute pleurisy commences like all inflammations with redness and hyperemia of the capillary vessels, the epithelium is thrust off, the serosa loses its gloss and smoothness and a soft membranous exudate is built on the surface of the serosa. This exudate consists, according to Rindfleisch, of blood fibrin from the capillary vessels, and contains large numbers of the thrust-off epithelial cells. These epithelial cells are, according to the investiga-

*Read before the Buffalo Medical Association, Feb. 1, 1875.

tions of Rindfleisch, capable of further development, and of forming tissue cells and vessels, and he is of the opinion, that most of the vessels afterwards found in this exudate, are formed of these epithelial cells, and only few come from the serosa. The more tissue there is formed, the more the fibrin vanishes by resorption, and while at first the membranous exudate could easily be removed from the serosa, the connection between them will now be more firm, the newly built tissue uniting with the tissue of the serosa. If the inflammation stops here we shall have a pleuritis sicca, and the serosa will have taken only a small part in the formation of the membranous exudate. Afterwards, we often find, that the pleura parietalis and visceralis have grown together, wholly or in part, on there is built a thick, fibrous, shining stratum, on different portions of the pleura. But generally the inflammation goes farther, and after some days the tissue of the serosa commences to take part in the inflammation. The serosa will then be found filled with numerous young tissue cells, especially near the surface, and on the surface they form an independent stratum, a pseudo-membrane that has a tendency to organization and must be distinguished from the membranous exudate, formed of fibrin and epithelial cells. In this pseudo-membrane capillary vessels are soon formed, and these capillary vessels are large and easily rupture, and we can thus get a hæmorrhagic exudate. While this membrane is being formed, a copious amount of serum is transuded from the vessels of the serosa which at first will be found in the lowest part of the cavity of the pleura, but, as it increases in quantity, it compresses the lung, displaces the liver, heart and diaphragm, expands the chest and inter-costal spaces.

If resorption takes place, the organs can and will return to their normal places, and the lung be perfectly expanded again. But according to Foster, this only takes place when resorption occurs in three or four weeks. If it lasts longer a change takes place that prevents the expansion of the lung and by that, complete recovery, and this is the retraction of the newly built tissue.

In accordance with the investigations of Brouardel the lung is surrounded after two or three weeks with a firm tissue-stroma,

and by that prevented from perfectly expanding. The new building of tissue is not confined to the surface of the serosa but attacks the serosa itself and the interlobular walls, and thus force its way into the lung.

Thus there is formed an interstitial pneumonia, and this commences during the first days of the inflammation. By that, too, the lung loses its ability of expansion, and when the resorption at last sets in, the thorax must sink in and we get deformity, scoliosis, with all its consequences. The retraction of the newly-built tissue in the interlobular walls has also another effect, and that is the dilatation of the bronchi, a relation that Niemeier has shown and that can produce other diseases.

But the resorption itself meets with difficulties, when the tissues commence to retract, the newly-built vessels, through which the resorption takes place, partly vanishing and partly getting smaller.

If we now perform thoracentesis at an early period, for instance in the first week, or as soon as the diagnosis is fixed, the relation will be modified. The retraction of the tissue has not commenced, and the expansion of the lung will take place in the same degree as the exudate gets smaller, and when this has gone, the lung is perfectly expanded, which we can show,

1st, By the difference in the percussion, which becomes clear, (generally it does not become perfectly clear, because the pseudomembranes remain).

2d. By the respiration which is heard vesicular to the base of the lung.

3d. By the entrance of the vibrations of the voice, which, to be sure, are not felt quite as well as over the healthy lung, and

4th. By the frequent entrance of the friction sound; the patient too, feels much relieved and breathes more easily and better.

But, you may say, you remove the exudate, but how will you prevent its coming again? It often comes again, but then you can operate again, and with a capillary trocar this operation is of so little importance that it hardly deserves the name of operation, and the danger is, judging by the numerous operations

which have been performed, very small, if you are only careful to have a clean apparatus and to exclude the air.

Even if you penetrate the lung with such a small trocar, it will not be of great importance and will result only in a small interstitial pneumonia around the wound. But often the exudate does not appear again, and possibly the newly-built tissue has something to do with that. It is elastic, and when the lung now suddenly expands, the same change must occur in the tissue as when it retracts gradually, namely compression of the vessels, and so, what without thoracentesis prevents the resorption, might possibly after the thoracentesis prevent a new exudation. This is only my theory, but it is a fact, that the exudate often does not appear again, and that immediate recovery often occurs after a thoracentesis, performed at an early period. A danger that has been thought important is the possible transformation of a serous exudate into a purulent, that is, the formation of empyema. I do not remember to have seen that occur, although I have seen many early thoracenteses performed, and when the apparatus is clean, and the air excluded, I do not believe that the operation has to bear the blame if this occurs.

As to the early operation itself, experience has shown that the prospect of recovery diminishes in direct proportion to the duration of the disease. Thus Dr. Evans found, that the percentage of death, when the operation was performed in the fourth week was 12 per cent.; 23 per cent. when it was performed between the first and second month; 50 per cent. in the third month, and 62 per cent. after the fourth month. He has gathered 308 cases in which the operation was performed for serous exudate, and only in two cases death occurred owing to the operation, in one case through hæmorrhage from an artery wounded by the operation, and in another from the shock. And even in cases where death occurs afterwards, life was prolonged and the patient felt much relieved.

Another reason to operate early is, that pleuritis can occasion sudden death, through thrombosis of the pulmonary artery, produced by disturbances of the circulation in a mechanical manner. Moreover a compressed lung is especially exposed to tuberculosis and other chronic diseases, and for that reason an early operation

would be advisable as the lung, after a late operation cannot be perfectly expanded again. Evans advises the early operation especially in cases where the exudate comes stealthily and without constitutional disturbances and is only discovered through physical examination, cases which especially defy medical treatment.

The operation is very easy. The patient is put in a half-sitting position and the thrusting-in is made in the posterior axillary line between the seventh and ninth ribs, and if possible, nearer the lower than the upper rib to avoid the artery.

It is not necessary to use chloroform as the operation is not very painful. Different instruments have been invented, which I shall not mention, but confine myself to the instrument we use in Denmark, and that unites moderate cost with solidity and simplicity. It consists of a trocar, united with a glass syringe by a rubber tube, on which we have a double cock. When the trocar has been introduced, and the stylet is to be taken out, the patient must stop breathing for a moment, till you have united the rubber tube with the trocar, that no air shall come by the inspiration, into the cavity of the pleura. For the rest, the apparatus explains itself.

When all fluid has been drawn out the little wound must be closed with a piece of plaster or collodium.

During the evacuation of the cavity, generally strong attacks of coughing come on which can be relieved by giving, before the operation, a subcutaneous injection of morphine. I remember also to have seen and read that a copious, thin, albuminous expectoration often follows the operation, but shall not try to explain this phenomenon.

Lastly I will take the liberty to report a case I have had under treatment. The patient, Mr. Glass, forty-five years of age, has never before had any disease of the lungs. On the 27th of December, 1875, I saw him in his home after having for some time previously treated him for lumbago, and he complained then of pains in his right side, especially on deep inspirations, but as physical examination did not show anything abnormal and the patient had no fever, I considered the case to be pleurodynia, and treated it with derivatives. The pain continued however without change, he

lost his appetite, felt thirst. but had very little fever, the temperature never being over 99° F.

On the third of January, 1876, distinct signs of pleurisy were first discovered. The percussion was dull, in front from fifth rib, behind almost from the angle of the scapula, the respiration and vibrations of voice were heard and felt weakened, no expectoration or sign of pneumonia. The pulse was 100, there was no increase of temperature.

During the following days the exudate increased, so that on the 9th of January it reached in front to the third rib, behind to the spine of the scapula, and the respiration was inaudible over the dull parts. The general health had grown worse, he did not take any nourishment, was very short of breath and uneasy. I therefore performed—Dr. Hopkins being present—thoracentesis, by which fully two quarts of sero-fibrinous, slightly hæmorrhagic exudate was removed. Immediately after the operation, the percussion became almost clear and the respiration was heard vesicular to the base of the lung; the vibrations of the voice also, could now be felt, the patient felt much relieved and breathed more easily.

The following days the exudate increased again, but only in a very little degree, so that the percussion never was perfectly dull to the angle of the scapula and so that the respiration and the vibrations were heard and felt to the base of the lung, but not so distinct as on the left side.

He commenced to have appetite, could sleep during the nights, the pain in the side decreased, especially after the application of a vesicatory, and he gained strength every day. From the 14th of January the dullness on percussion commenced gradually to decrease again, the respiration was heard more and more distinctly, and on the 22d of January he was able to leave the bed, all signs of pleurisy having almost disappeared.

We have then here a case of acute serous pleurisy, that came stealthily and only was discovered by the physical examination, a case that probably would have taken many weeks, if not months, for resorption without operation, even supposing this could have been accomplished.

The operation was performed on the sixth day of the disease, and the case terminated in almost immediate recovery.

I have often seen the same result following this operation, and never saw any bad effect of the operation, and I therefore feel inclined to operate early and believe, the earlier the better.

I do not believe you can operate too early, but you may operate too late.

Before the publication of this paper another case of pleuresy occurred in my practice which I treated in the same way, and reported in the April meeting, and as this case, in my opinion, especially shows the value of the thoracentesis as a curative operation, I will take the liberty to add it here. The patient, Mr. Casey, 39 years of age, consulted me on the 10th of March, 1876. He has always enjoyed good health and does not think he has ever been sick. His disease commenced about twenty days previously with pain and stitch in the left side, a little cough with bronchitic expectoration, some shortening of breath and with only little fever, so that he had not been obliged at all to keep his bed. The pain in the side decreased gradually, but the shortening of breath increased slowly, but so much but that he, on the 10th of March, was able to walk from his house to me and back again, a distance of more than two miles.

At the examination I found dull percussion, behind from the midst of the regio infrascapular, in front from fifth rib, and slight tympanitic percussion below the collar-bone.

The respirations and vibrations of voice were heard and felt much weakened, almost inaudible, over the dull parts. He had no expectoration, no rales were heard, he made thirty-two inspirations in a minute. I advised him to have thoracentesis performed but he would not consent. After having, for the following six days, been treated by another physician, who advised him by no means to have this operation performed, he came back to me on the 16th of March, 1876, and declared he should have the operation performed as he felt worse and worse, but still that day he was able to walk, in very bad weather, to me and back again.

The shortening of breath had increased a little, he made thirty-six inspirations in a minute, but the percussion was now dull

behind to the spine of the scapula, in front to the second rib, and the respirations and vibrations of voice were perfectly inaudible over the dull parts. The pulse was 100, the temperature 98° , the heart displaced. The next day, the 17th of March, I performed thoracentesis—Drs. Hopkins and Fowler being present—by which fully three quarts and a half i. e. 3500 cub. cent. sero-fibrinous exudate were removed. The exudate coagulated immediately after the removal. He felt better after the operation, the percussion became perfectly clear in front, and almost clear behind, and the respirations were heard to the base of the lung, but a little weakened, the vibrations of voice were also felt, but weakened.

He coughed some during the following night, but except that he felt comfortable. The next day, the 18th of March, he made only twenty inspirations in a minute, he had no fever, the pulse was 96, the percussion and the respirations as the day before, the heart in its right place. A soft friction sound was heard for some days. From the 18th of March to the 31st of March, on which day he was able to leave his bed, he gained strength rapidly; he had not a single time fever, the temperature never being over 98° , the cough ceased gradually, the percussion became almost clear in the regio infrascapularis, the respirations and vibrations of voice became nearer and nearer normal, and on the 31st of March the only sign of his disease was a slight dullness in the lower part of the regio infrascapularis.

In my opinion, this case shows that this operation is, or at any rate can be, curative, and I myself have not the slightest doubt that I have cured the patient by aid of the operation. I cannot deny that he might have recovered without the operation, but it would by such a copious and still increasing exudate at any rate have taken months, and by the operation he recovered in fourteen days, and avoided all the dangers that follow this disease when it is protracted.

The result in these two cases is at any rate encouraging, and I myself will perform the operation as often as I get an opportunity.

ART. IV.—*Abstract of the Proceedings of the Buffalo Medical Association.* Tuesday evening, March 7, 1876.

The Vice-President, Dr. Wyckoff, in the chair. Present—Drs. Cronyn, Howe Mynter, Samo, O'Brien, Lothrop, Bartlett, Briggs, Hopkins and Brush. By invitation, Dr. Baker. Minutes read and approved. Applications for membership were received from Drs. S. S. Green, W. H. Slacer, W. C. Earl and S. G. Dorr.

On motion of Dr. Cronyn the paper read by Dr. Mynter at the February meeting was taken from the table for discussion. (See Art. III., Page 377).

DR. CRONYN said that he believed the point intended to be made by the author was the value and advisability of early paracentesis without waiting for absorption or empyema. He believed this to be an important question, and one that demanded serious consideration. He spoke of the difficulty of always recognizing the presence of the fluid, and the dangers which might arise in a mistaken diagnosis. Mr. Waters, of London, had written a paper upon this very subject, his views were that when the pleural cavity was full, and there was considerable constitutional disturbance, with dyspnœa, immediate measures should be taken for the relief of the patient. He warns younger surgeons of the fact that death may suddenly occur during the operation, but does not give the cause for such an occurrence. Before making the operation the surgeon should satisfy himself that absorption can not be promoted by other means.

DR. BARTLETT said that this was a subject which required careful consideration. A careful and accurate diagnosis should be made in the first place, the surgeon should also satisfy himself that his operation was not in danger of aggravating the condition of the patient rather than relieving it. His experience thus far had been chiefly with an expectant treatment, the employment of diuretics and mercurials.

DR. MYNTER said that he had very little to add to what he had said in his paper. He thought that there was but very little danger in the operation, certainly not more than waiting. When the physician waits for the fluid to be carried off by the slow process

of absorption, the lung is often so compressed that it cannot expand, as a result of which, we have chronic pneumonia, phthisis, etc. The patient referred to in the paper read at the last meeting, was now perfectly well of his pleurisy.

It is perhaps difficult at times to diagnose these cases with certainty, but even if the diagnosis is not accurate, the introduction of the small clean trocar of the aspirator cannot be productive of much harm should the lung even be punctured.

DR. HOPKINS said that it occurred to him that we should be careful to separate in our minds the operation proposed by Dr. Mynter and the operation for the relief of empyema. Dr. Mynter proposes to operate for the cure of pleuritic effusions in the early days of the disease, and on purely theoretical grounds his operation was plausible.

DR. CRONYN said that in Dr. Mynter's operation as well as in that for empyema, relief was what was intended at first, cure might perhaps be expected, but he thought the primary object of the operation was to relieve the patient.

DR. MYNTER replied that of course he expected to relieve the patient but that he proposed to operate with an idea of accomplishing a cure.

DR. CRONYN said that he thought that Dr. Mynter did not intend to recommend this operation unless there was some imperative necessity for the removal of the fluid, as dyspnoea, too great compression of the lungs, etc.

DR. MYNTER said that in the case reported the operation was made as a curative measure, not as a palliative. The condition of the patient was not such as demanded any immediate means for relief. Had it been desirable there was sufficient time for the employment of other means.

DR. BARTLETT said, that in the consideration of this subject, we should, if possible, take into account the question of how many cases recover in ordinary medical practice. We should ask ourselves whether a reasonably large proportion of cases do not recover under ordinary treatment before adopting an operation which must be attended by some danger. He spoke now of its employment as a curative measure in ordinary cases; of course where

the accumulation of fluid was rapid or from the large amount present, the patient was in danger from great dyspnœa, it was the only resource left.

DR. WYCKOFF said that he had never seen any very unfavorable results follow an early operation. He had operated on different occasions but always as a palliative measure. In a large number of cases the effusion which came on after the operation was as great or greater than before, and necessitated another operation. He should not operate in cases where the effusion was slight or when the breathing and general condition of the patient was not badly affected.

DR. CRONYN said that it was always his advice to his younger brethren in the profession never to perform any operation of any magnitude or risk without the co-operation and advice of some older medical man. The slightest operations, even if the diagnosis, etc., were correct, might be followed by serious results and the presence of older and more experienced practitioners would be desirable as a protective measure.

DR. WYCKOFF said that the character of the fluid in cases of the kind under discussion could be very easily ascertained by the use of the ordinary hypodermic syringe.

DR. HOPKINS, spoke of a case of hip-joint disease, of about three months duration, in which the head of the bone was dislocated forward and under Pouparts ligament. The limb is drawn backward and outwards, and fixed in that position. The dislocation was of about three weeks standing.

DR. CRONYN said that dislocations of the head of the bone in hip-joint diseases were liable to occur in almost any direction. Dr. Harrington brought to the Sisters Hospital, some time since, a little boy with dislocation of the head of the femur upon the dorsum of the ilium, as result of disease. The dislocation was reduced, and proper retentive apparatus applied. At last accounts the patient was doing well.

DR. BRUSH said that it would seem to him that the cases in which the disease had reached such a point as to render dislocation liable were rare, in which reduction would be productive of any beneficial results. He related a case seen by him, in charge of Dr. J. F. Miner, in which the head of the bone was dislocated upon the pubis.

The disease, a result of injury, had existed for some years. Several sinuses lead down to the bone, the head and neck of which were denuded and roughened. Dr. Miner exsected the head and two inches of the shaft. The operation was undertaken as a last resort, the patient, a young man twenty-four years of age, having tried all other means of treatment before submitting to exsection. After the removal of the head of the femur immediate relief was experienced by the patient, his appetite improved, the discharge, became less, and for a time he improved rapidly. He died at the end of about two weeks from acute peritonitis, probably the result of an abscess opening into the pelvic cavity. The result of exsection of the hip-joint are often surprising. Dr. Sayre, who has had the largest experience of any man in this country if not in the world, has, in over fifty cases, met with a large percentage of success.*

DR. BARTLETT asked in regard to the employment of the extension splints of Sayre and Taylor.

DR. BRUSH, replied that if properly applied at the right period of the disease they prevented further extension of the disease and frequently their use resulted in a cure.

DR. O'BRIEN, in reply to a question as to the prevailing diseases, reported seven cases of small pox only. One in Folsom Street, one on Delevan Avenue beyond Cold Spring and five in the pest house. No special disease seemed to be prevailing.

DR. HOWE spoke in reference to myopia in school children. He referred to the investigations of Donders, Agnew, Williams and others, and said that he proposed to make similar investigations in Buffalo.

DR. LOTHROP moved that the Association endorse Dr. Howe in his investigations, and that he be requested to report the result of his labors to this Association at some future meeting. Carried.

On motion the Association adjourned.

* In a work on Orthopædic Surgery and Diseases of the Joints, just issued by Dr. Sayre, he gives the result of fifty-nine exsections of the hip-joint made by him, as follows:—Whole number of cases fifty-nine, of which thirty-nine are still alive. Of the twenty who died eight had recovered from the operation some time previous to death, which was caused by some disease foreign to the operation; four of the remaining twelve died of some acute intercurrent disease, tetanus, double pneumonia, dysentery and sun-stroke, leaving but eight who died from the exhaustive effect of hip disease.

Of the thirty-nine still alive, twenty recovered with motion and less than one inch shortening; eight recovered with motion and more than one inch shortening; two recovered with ankylosis, and nine are still under treatment, with every prospect of good results.

MISCELLANEOUS.

The Operative Treatment of Pleuritic Exudations.

"An important contribution on this subject appears in the recent volume of the 'Berlin Charite Reports' (*Charite Annalen*, edited by Dr. Mehlhausen; Hirschwald's, Berlin, 1876, pp. 752). It is from the pen of Dr. Ewald, and is founded on the observation of 250 cases which were admitted into the medical clinical wards of Professor Frerichs during a period of fifteen years, from June 1, 1860 to June 1, 1875. This question is raised less with a view to the recording of individual cases of serous effusion which have been successfully aspirated, or of purulent cases which have been successfully and freely opened, but rather in the view of laying before the profession the results of a large number of cases treated by the same individual under similar circumstances and surroundings, and during a given period of years. Unfortunately, such statistics are comparatively rare, though a considerable number of single cases are scattered throughout the extensive literature bearing on this subject. Dr. Ewald sets out with the assumption 'that there are cases in which the timely and artificial evacuation of the collected fluid alone can save from an either directly or indirectly unfavorable termination.'

It is in the hope of contributing some reliable data as to the 'when' and the 'how' this interference shall be most aptly exercised that the author has undertaken a publication, which we shall now proceed to consider. Of the 250 cases 204 were cases of serous effusion. We will take these first. It appears that during the years 1860-70 no cases of serous effusion were tapped, but were treated on general principles. The figures do not include some complicated cases in which the effusion was due either to tuberculosis or cancer, such cases being quite outside the question of surgical treatment. He deducts, also, some of the slighter cases, about which there never was any question of mechanical interference; and in this way the numbers are reduced to 143 cases with four deaths, during a period of fifteen years. As before said, serous effusions were not tapped previous to the year 1870, but between this date and 1875 twenty-six of the cases were tapped, all recovering. This small proportion of operated cases will at once show that only in certain cases was interference considered desirable; and, indeed, the following are his two chief indications: First, danger to life from pressure on vital organs; secondly, the apparent uselessness of drugs, if, after a three weeks' trial, they have failed to carry off the effusion. Con-

cerning the first indication authors are fairly unanimous, but less so with regard to the second, the chief differences of opinion being as to the re collection of fluid after tapping, its tendency to become purulent, and the actual capability of the lung to expand. As regards the re-collection of fluid after tapping, this our author considers as dependent on the time at which the tapping is performed; if it be done while the pleura has a natural tendency to exudation, tapping can in no way modify it—may possibly even increase it; for, as Wintrich says, tapping only draws off a product of disease, and not the disease itself. The indication, therefore, is to wait until physical examination determines the height of the disease, as judged by a standstill of the previously increasing dullness, which generally takes place in the third or fourth week. The tendency to become purulent is generally ascribed to two chief causes—first, directly to the operation; and, secondly, to the determining influence of the draining away of the fluid. Dr. Ewald, however, takes another view. Of thirty-five cases nine became purulent, but of these four times the fluid was turbid from the first, in one a canula was purposely left in the chest, and in the remaining four the operation was done much earlier than he now advises. The other cases, twenty-six in number, were tapped after the fourth week, and all continued serous throughout. In face of these facts, he considers himself justified in formulating that tapping does not tend to the conversion of a serous into a purulent pleurisy, provided due care be exercised in the time and mode of operating, the proper disinfection of the instruments used, and in carefully excluding air from the chest.

There can be no doubt as Trousseau has shown, that certain exudations tend of themselves to become purulent in time. It is especially the case in secondary pleurisies; and so, if from necessity the fluid has been drawn off early, while still serous, its becoming purulent at a latter stage must be ascribed rather to a natural pathological process than to the operation of thoracentesis. Next comes the question, After how long will a compressed lung re-expand? Authors vary on this point, and some exceptional cases, no doubt, show that even after a six month's compression the lung may unfold and regain its normal proportions. As a rule, however, one may state eight weeks as the average time; the date of the first tapping and the amount of the evacuated fluid being factors of no small moment in the estimation of this point. Dr. Ewald lays considerable stress on the mode of operating; he disapproves of the so-called suction instruments, as uncertain and unequal in action. As a rule, it is best to trust to the pressure from within, and only in some rare cases, when the fluid is viscid or thick, to apply a gentle suction. Deep inspirations, by expanding the lung, will generally force out as much of the fluid as it is wise or proper to withdraw; and it not unfrequently happens, should any be left behind, that it is shortly reabsorbed. He has only had

one case in which the albuminous expectoration prescribed by Terillon was present.

Passing on to the consideration of purulent effusions, Dr. Ewald begins by reaffirming his opinion that these cases, which seems to have become purulent in consequence of tapping, really contained within themselves the elements of purulency. He especially cautions us to shake our patient before making the trial puncture, lest, owing to position, the solid elements of the pus may have gravitated to the lowest part of the cavity, leaving only a serous supernatant fluid, which would infallibly mislead us if we trusted to it. He considers it all important to find out as early as possible the real nature of the exudation, and counsels the use of a hypodermic or similar syringe for exploration in all cases. "We have punctured," says he, "in hundreds of cases, and have gone into both liver and lung—sometimes on purpose, sometimes accidentally—and have never once seen the slightest harm result therefrom." Great stress is laid on the necessity for absolute cleanliness and the desirability of soaking one's needle in carbolic acid solution just before using it. As to the period at which pus is formed, he gives one case where it was found on the fifth day of the illness; another on the seventh day. Then, as to treatment, some interesting statistics are given, showing that out of forty six cases twenty-six were freely opened, with 12 deaths (46.15 per cent.); nine were aspirated, with seven deaths (77.77 per cent.); and eleven were treated therapeutically, with seven deaths (63.63 per cent.); The first two included the *empyemata necessitatis* (spontaneously opened empyemata), which were naturally not included in the third series. Or, from another point of view, excluding the *empyemata necessitatis*, he gives twenty-one cases freely opened, with ten deaths (47.74 per cent.); eight cases aspirated with six deaths (75.00 per cent.); and seventeen cases (including the *empyemata necessitatis*) treated medicinally, with ten deaths (58.82 per cent.). These figures speak for themselves, and it will be at once inferred that the author strongly advocates a free incision so soon as the diagnosis of pus is established.

Concerning the duration of the disease, he points out the cases which were operated on had an average duration of six to nine months, as against five to six of the non-operated ones; and that the mortality increases in ratio direct with the length of time which is allowed to elapse between the commencement of the disease and the surgical treatment; also, that in young patients recovery is more frequent and more complete than in older ones.

Aspiration of the chest is not considered satisfactory, because, under ordinary circumstances, it is not possible to get rid of all the pus collected unless air be admitted; and partial evacuation is more or less useless, for the same reason that the partial evacuation of an external abscess would be considered insufficient, The

author, as a result of his own observations, then, considers that a free opening into the chest, as soon as the diagnosis is definitely made, offers the best chance for the patient's recovery.

A free exit for the pus may be secured ; and he advises that, if other means fail, Roser's method of resecting a portion of rib should be adopted. The chest-cavity at first is to be washed out twice a day, and afterwards once a day, with such solutions (carbolic acid, Condy's fluid, iodine, iodide of potassium, etc.) as circumstances may suggest, and such constitutional remedies as may seem indicated are to be prescribed.

From what has been said, therefore, it will be seen that there is a wide difference in the results of treatment in these two diseases, and it is to be regretted that they are not alike favorable. Perhaps some will be disappointed in the conclusions which have been drawn concerning purulent effusion into the chest, as to its mortality under any method of treatment, but especially when treated by the method of aspiration. Still it is a fact that only about 7 per cent. recover, and some few of these even are doubtful as to their final condition. The cases in which the chest is freely opened do best, and even then only about one-half recover.—*Med. Times and Gaz.*, April 1, 1876.

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Non-identity of Croup and Diphtheria as shown in their Pathological and Histological Anatomy.

“Notwithstanding the high authorities who maintain the identity of these diseases, we have always inclined to the belief, both from their clinical and therapeutic characters, that they are distinct affections. Mr. John Moir in an interesting article (*British Med. Journ.*, March 18, 1876), maintains their non-identity, founded on their pathological and histological anatomy. ‘Recent investigations,’ he says, ‘prove that in both croup and diphtheria the membrane consists largely of corpuscles; but Dr. Carpenter warns us, that ‘it has been too much the habit of pathologists to speak of “coagulable” or “plastic” lymph as if it were always one and the same thing; yet it really presents various gradations of character, which are manifested in its different degrees of organizability, and in the diverse nature of the tissues developed from it.’ Sir James Paget points out two typical forms, the fibrinous and the corpuscular, between which the others are intermediate; and I hold that the membrane of diphtheria partakes more of the fibrinous, and that of croup of the corpuscular character. The fibrous exudations coagulates into a fibrous clot resembling that of healthy blood, but showing a more distinct fibrillation; the latter (the

croupous exudation of Rokitansky) is characterized by the want of any proper coagulation, the fibrous clot being replaced by an aggregation of cells, which in their first appearance resemble very nearly the primordial condition of the corpuscles of the fluids of the absorbent vessels and the colorless corpuscles of the blood. In the "croupous exudation," the false membrane is not plastic, to no extent fibrinous even, but very largely corpuscular. Rindfleisch, the most recent observer, says 'it is not fibrinous at all, but only apparently so.' Moreover it is usually thin and soft below the larynx; about the middle of the windpipe, more dense and firm; lower down, generally looser again, pulpy and broken into flat or tubular fragments, and never connected by blood-vessels with the surface from which it proceeds; it can be entirely detached, often with but little difficulty; in fine it is more brittle, less fibrinous, and much more albuminous than the usual products of inflammation. Mr. Campbell de Morgan, in a letter I received from him on this subject four or five years ago, after stating his belief in the non-identity of croup and diphtheria, says: 'There is no evidence that any development goes on in the false membranes; the moment they are exuded they are virtually dead; whereas in morbid growths, properly so-called, there is a constant development going on in the new tissue.' We find, then, that the corpuscular is the lowest form of the 'exudation of lymph.' Diphtheria and croup are both in their false membranes forms of this nature, though not and never in an exactly similar degree; croup being a lower form, and, therefore, less organizable than the other.

"Mr. J. Werrington Haward, from his observations in St. George's Hospital and elsewhere, states his belief that 'there are two distinct combinations of symptoms, with their associated pathological changes, to one of which may be given the name of croup, to the other diphtheria; that these combinations are constant; and that the elements and terms of the one are never mixed with those of the other (though there may be certain added qualities common to both); that the constant combinations are of the important and essential elements in each quantity; and that these are always occurring in the same and distinct association. There is sufficient ground for regarding each of the two diseases made up of these elements as distinct and non-identical.'

"Mr. Campbell De Morgan expresses no doubt that in these cases the blood is diseased, and in different manners, and there is an exudation of special fibrinous material' (that is, fibrinous material special to diphtheria) 'and of white blood-corpuscles more or less changed' (in croup).

According to Prof. Sanders, of Edinburgh, "the essential difference between the croupous and diphtheritic membranes lies in this, that the croupous membrane effects the epithelial investment of the mucous surface, whilst the diphtheritic is not confined to the surface, but is a product of the entire thickness of the mucous

membrane.' And here we have the true physiological explanation of the interesting clinical fact that, whereas in diphtheria there are often epistaxis and bloody expectoration, these never occur in croup. Dr. Sanders is not alone in his observations; in Germany, similar anatomical distinctions are the basis on which the distinctive differences between the two diseases are rightly founded. The *Lancet* of March 27, 1873, states that 'the exudation in diphtheria varies very much, and is decidedly distinct from that of idiopathic croup.' M. G. S. Empis also, in his observations at the Hopital Necker in 1848, had noticed, and in 1850, in the *Archives Generates de Medecine*, very distinctly enunciated, that 'the mucous membrane of the trachea is the only part where we have observed pellicles adherent to the mucous membrane, without the latter having been denuded of its epithelium. On whatever other part I may have had occasion to study diphtheria, whether on the mucous membrane, the lips, the tongue, the pharynx, the nasal fossæ, the vulva, etc., the mucous basement membrane was found in contact with the false membrane and the epithelium no longer existed.' Here we have a close agreement, closer could not be, between two independent and trustworthy observers, Empis and Sanders; and not to be too long, I will only bring forward one other, whose competency will be at once acknowledged by all, Mr. Jabez Hogg, President of the London Microscopical Society, and surgeon to the Royal Westminster Ophthalmic Hospital.

"This important difference between a fibrillated membrane prone to pass rapidly into the ulcerative process,' and 'a delicate film' which never penetrates to the deeper structures, and is thrown off very soon after formation, seems to have occurred to no one. 'I maintain that a sharp line can be drawn between the histological anatomy of diphtheritic membranes and croupous casts; and, surely, if so, it will no longer be denied that they indicate perfectly distinct and specific forms of disease. I will first glance at the general naked-eye appearance of the tracheal membrane usually found in diphtheria. As its name implies, it is a dense, compact, yellowish-white or reddish-grey colored, well-formed mass, of from half a line to three lines in thickness. It is usually adherent to the subjacent membrane, and moulded upon it, and is more or less friable; so that on traction with forceps to detach it, it comes away piecemeal, or in a layer somewhat resembling chamois-leather. If forcibly detached a breach of continuity of surface is made, and bleeding occurs, as the mucous membrane is always much congested. Frequently, a general tumefaction and ulceration involves the muscular tissue, and suppurating points dip down to the cartilages. By no unaided effort of the patients in the extreme paroxysm will the membrane be thrown off.

"In striking contrast, the croupous cast is semitransparent, delicate, and tender to handle, somewhat gelatinous, and of a pale yellowish color, easily separable from the subjacent surface as an

imperfect cast of the part on which it is formed. It is only after the death of the patient that it is seen to be opaque, and composed of more than one layer. It is generally thrown off during a violent fit of coughing, when the patient finds almost immediate relief from the more urgent symptoms. It is never found so intimately connected with the subjacent mucous membrane as to cause bleeding. It is simply a clean cast of the superficial epithelial layer, closely resembling the cast-off skin shed by some of the lower animals—the growing amphibia, for example.

“The histological differences are much more strongly marked. Diphtheritic membrane requires a good deal of teasing out to fit it for microscopic examination. A power of 350 diametres reveals an aggregation of granular matters, nucleated epithelium, fat-molecules, and minute crystals, held together by interspersed bands of connective tissue. Muco-purulent corpuscles often entangle foreign bodies, and in throat affections, the spores of the oidium albicans are rapidly developed. The membrane is, in short, a laminated fibroid mass of the superficial and deeper seated structures, in a later stage involving the submucous tissues, muscles, glands, and cartilages. In sections made from various preparations, portions of all these structures have been well seen, and sometimes I have found considerable hypertrophy of the connective and fibrous tissues.

“A portion of the croupous cast, however, examined under the same power, consists of numerous cylindrical and pavement epithelial cells, granular matter, fat-corpuscles, and mucous with some occasional foreign bodies, as particles of food entangled in a protoplasmic homogeneous matrix. The columnar epithelial cells retain their cilia and are filled with clear sarcode, and nucleated. It is, therefore, surmised that these casts are not long retained; probably they are thrown off soon after their formation. Fungus spores are rarely found entangled in these films, which are characterized by an extensive cell-proliferation rather than a transudation or true exudation. Although some of the croup casts differ a good deal in color and consistency, connective or fibrous tissue never enters into their composition.

“These facts, which have been established by Mr. Hogg by repeated demonstrations under the microscope, and verified by Dr. Greenfield of St. Thomas's Hospital, account, in the most satisfactory manner, for the therapeutic value of emetics in croup, and their utter uselessness in diphtheria.

“Mr. Jabez Hogg states that, with regard to croup, there is always one point in its etiology which appears to me not to have received much attention; and yet it is of some importance, as seeming to separate it very widely from diphtheria. I refer to its peculiar hereditariness. I have seen several marked instances of this; and I am now attending a family for an affection (strumous) of the eye, in which croup has gone down to the third generation,

affecting the males of the family in particular. No one ever heard of diphtheria having been transmitted from father to son, or from mother to daughter, that I am aware of."—*Monthly Abstract*.

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Editorial.

Preliminary Education of Medical Students.

We clip the following from the Annual Announcement of the Buffalo Medical College for the session of 1876-'77:

"Upon Matriculating, students will be required to pass an examination which shall exhibit evidence of possessing that preliminary education necessary to the intelligent discharge of a Physician's duties.

"Certificates of attendance at, or graduation from Literary Colleges, Scientific Schools or Medical Colleges, or diplomas from High Schools or Academies, will exempt from this examination."

This is a step in advance which we are glad to welcome. While it will not, to some, seem a sufficiently high standard, they must remember that few reforms are accomplished at once, there are the important initiatory steps which serve as much to bring about the desired end as the grand final move. Medical students have heretofore been exempt from all inquiries as to their fitness to study medicine, and to require of them at once to pass an examination as difficult as some propose, is simply absurd, especially so when the whole profession are not united on the subject.

The examination of students entering upon the study of medicine should properly belong to the colleges. Where this is not enforced, the next best move in advance is to have it undertaken by the County Societies. The Medical Society of the State of New York has proposed, and a few County Societies under its recommendation have adopted, resolutions forbidding any member of those organizations receiving students who have not passed an examination before a board appointed by those societies. As a step forward in medical reform this is an important move; it is, however, in many respects defective. The Medical Society of the County of Erie, for instance, has a Primary Board for the examination of medical students, the societies of several of the counties in close proximity have none, it is then, perfectly evident that students from the counties where no examination is required can demand entrance to medical colleges on the same conditions as those who have a certificate of proper qualification. But, should all the societies of the State require students to appear before their Boards of Examiners, it is evident that the standard of excellence, and the strictness of the examination would vary with the different boards, and some students would

be admitted to study in evident injustice to others who had been debarred from that right.

The Primary Board of the Medical Society of the County of Erie, in their annual report presented January 11th, 1876, use the following language : *

"We must bear in mind too, that the prime object of medical schools is not to benefit the profession at large, and to promote medical science, but the pecuniary and professional advantage of their faculties. And we have no right to expect them to take an active interest in a work of reform, which if thoroughly carried out, might result to their disadvantage."

If the gentlemen who wrote that report are in earnest, we are sorry they have no higher appreciation of their professional brethren who are engaged in medical teaching. It is true there are schools of medicine, hospitals and various medical charities, which are organized solely for the purpose of advertising the medical men connected with them, and the fact is certainly to be lamented that the ardent rivalry of some, or the desire of others for advertisement has produced so many medical colleges; colleges, like a Western institution now before the profession in no enviable light, which receive students from almost any source for almost nothing, and graduate them in almost no time.

We make the assertion, however, that the majority of medical teachers, those who to-day are held in respect by the mass of the profession, will gladly welcome any move which will elevate the mental attainments of those whom they receive as students. The time is not far distant, we hope, and already some of the medical schools are making preparations for the change, when the schools will take the matter entirely out of the hands of the profession. When private preceptors will be a thing of the past. Then the student will have to pass an entrance examination to a medical college as he would to a literary college, be required to spend a definite period in the pursuit of a graded course of study under a competent board of instructors, and pass an examination which shall be alike for all colleges, and be conducted by a State Board of Examiners. In accomplishing these reforms the colleges need the support of the general profession, they appreciate the difficulties of the situation better than any class of outside "reformers" can; whose motto is most excellent, but whose motives will not merit similar praise.

B.

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Sanitary Condition of Philadelphia.

We have received the following circular to which we direct the attention of our readers :

UNITED STATES CENTENNIAL COMMISSION. BUREAU OF MEDICAL SERVICE.

Owing to the very large number of persons who contemplate a visit to Philadelphia during the coming summer, it seems important that the utmost publicity should be given to all facts bearing on the sanitary condition of the city.

* Transactions of the Medical Society of the County of Erie, Buffalo, 1876. Pamphlet.

The following statistics, which have been obtained from the most authentic sources accessible, represent the mortality in some of the chief cities of the world during the past four or five years :—

	NUMBER OF YEARS.	AVERAGE POPULATION.	AVERAGE TOTAL MORTALITY.	AVERAGE DEATH RATE PER THOUSAND.
Vienna.....	5	648,560	20,424	31.42
New York.....	5	994,458	29,601	29.93
Berlin.....	4	950,000	28,420	29.91
London.....	5	3,284,488	76,741	23.33
Paris.....	4	1,851,792	42,724	23.06
Philadelphia.....	5	744,831	16,573	22.27

While thus showing an average rate of mortality more favorable than that found in any other city containing over 500,000 inhabitants, Philadelphia has recently (1874) attained a degree of healthfulness almost unparalleled, viz.: with a population at that time of 775,000, the number of deaths was but 14,966, giving a death rate of only 19.3 per thousand. These very favorable results are largely due to the abundant and cheap water-supply, and to the opportunities given, even to the poorest citizens, for the enjoyment of pure country air in the great Fairmount Park, which contains 2,991 acres. The extent to which this is valued by the citizens may be inferred from the fact that during the year 1875, the Park was visited by over eleven million persons.

The most powerful influence of all, however, is the absence of that overcrowding of the population, which is the most fruitful source of sickness and death in many quarters of nearly all other large cities. This will be more clearly comprehended when it is remembered that the 817,488 inhabitants of Philadelphia are spread over an area of 129 $\frac{1}{8}$ square miles, which are traversed by more than one thousand miles of streets and roads; and that the city contains, in addition to other kinds of buildings, 143,000 dwelling-houses occupied by families,—a number exceeding by over 40,000 that of any other city in America.

The climate of Philadelphia is also, on the whole, a favorable one, although presenting many of the peculiarities common to inland localities. The mean annual temperature of the last ten years is 53.73° Fahrenheit; the average annual rain-fall is about forty-five inches.

The following table exhibits the mean temperature of each month for the past ten years, showing that the range is far less extreme than is found in many other less favorably situated localities :—

Mean Temperature (Fahrenheit) of each Month durin the past Ten Years.

January	32.72° F.	July.....	78.74° F.
February.....	33.12 "	August.....	75.92 "
March.....	39.16 "	September.....	67.72 "
April.....	53.36 "	October	56.03 "
May.....	63.24 "	November.....	43.34 "
June.....	73.54 "	December.....	33.92 "

It is thus seen that only during the months of June, July, and August does the mean temperature rise to a high point. During this period there are very rarely any prevailing epidemic diseases; and the chief mortality occurs among children, especially among the poorer classes.

The health of Philadelphia at present is unusually good. Timely efforts have been made to secure an abundant water-supply to meet the great increase in the demand which must be expected this summer as compared with previous years. Constant watchfulness will be exercised by the authorities to maintain cleanliness, and to avoid or remove every possible cause of disease.

Within the Exhibition grounds a rigid sanitary inspection will be maintained, under the control of the Bureau of Medical Service; and thus a guarantee will be afforded that no cause of infection or disease will be allowed to occur through neglect of this important duty.

The object of this circular has been to call attention to the unusual sanitary advantages of Philadelphia, and to the preparations which have been made to ensure the highest possible degree of healthfulness during the approaching Exhibition season. It is proposed to issue at certain intervals other circulars, announcing in an official and accurate manner the sanitary condition of the city, so that entire security may be felt by all who desire to visit the Centennial International Exhibition.

WILLIAM PEPPER, M. D.,
Medical Director.

15th April, 1876.

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Meetings of Medical Societies.

The meeting of the American Medical Association is to be held in Philadelphia, Tuesday, June 6th, 1876. Dr. J. Marion Sims, President.

The annual meeting of the New York State Medical Society will be held in Albany, Tuesday, June ²⁹~~28~~th, 1876. Dr. Thos. F. Rochester, President. It is hoped there will be a full attendance. In this connection we give the following list of delegates from the New York State Medical Society to the International Medical Congress to be held at Philadelphia, Sept. 4th-9th, 1876 :

Frank H. Hamilton.....	New York.	Francis Burdick.	Johnstown, Fulton Co.
B. Fordyce Barker.....	New York.	Geo. J. Fisher.....	Sing Sing.
Edward H. Parker.....	Poughkeepsie.	Harvey Jewett.....	Canandaigua.
Frederick Hyde	Cortland Village.	Elksworth Eliot.....	New York.
Henry W. Dean....	Rochester.	Julius F. Miner... ..	Buffalo.
John P. Gray.....	Utica.	W. H. Bailey.....	Albany.
L. I. Teft.....	Syracuse.	E. R. Hun.....	Albany.
J. V. P. Quackenbush	Albany.	C. H. Porter.....	Albany.
James P. White.....	Buffalo.	J. Foster Jenkins.....	Yonkers.
George Burr	Binghamton.	A. M. Vedder.....	Schenectady.
S. O. Vanderpoel.....	Quarantine.	H. D. Didama.....	Syracuse.
G. A. Dayton	Mexico, Oswego Co.	E. R. Squibb.....	Brooklyn.
Wm. C. Wey.....	Elmira.	Alexander Hutchins.....	Brooklyn.
C. K. Agnew.....	New York.	H. D. Vosburg	Lyons.
B. F. Sherman ...	Ogdensburg.	Austin Flint, Jr. . . .	New York.
E. M. Moore.....	Rochester.	John D. Button.....	Auburn.
J. C. Hutchinson.....	Brooklyn.	Thomas M. Flandreau	Rome.

The Semi-Annual Meeting of the Medical Society of the County of Erie, will be held at the Buffalo Medical College, Tuesday, June 13th, 1876. A full attendance is desirable.

Books Reviewed.

Hospital Plans. Five Essays relating, to the Construction, Organization and Management of Hospitals, contributed by their Authors for the use of the Johns Hopkins Hospital of Baltimore. New York: Wm. Wood & Co. 1875. Buffalo: H. H. Otis.

The late Johns Hopkins of Baltimore, made a bequest, which now amounts to three million of dollars, for the establishment and maintenance of a hospital in that city. To the trustees entrusted with the management of this fund he gives directions to secure the advice of those at home and abroad who have met with the greatest success in the construction and management of Hospitals. These gentlemen accordingly directed their building committee to confer with five distinguished physicians who had made hospitals their especial study. The gentlemen selected were Drs. John S. Billings, Asst. Surg. U. S. A.; Norton Folsom, Supt. of the Massachusetts Gen'l Hospital; Joseph Jones, of the University of Louisiana and visiting Physician to the Charity Hospital, New Orleans; Caspar Morris, late visiting Physician to the Episcopal Hospital, Philadelphia; and Stephen Smith of New York. The report of these gentleman, with the accompanying plans, and some plans and reports presented by Mr. John R. Niernsee, make up the volume.

The subjects of Hospital construction and administration are attracting much attention from the profession. They involve a discussion of some of the finer points of drainage, ventilation, architecture, etc., and are not to be decided in a moment. The gentleman who have contributed to the volume before us are all, from their experience in these matters, competent authorities. Our space will not allow a detailed mention of the various plans proposed. The gentlemen are all in favor of well built, substantial buildings, the temporary barrack style, which can be taken down and removed as desired, receiving no favor from them. The work we regard as one of great value, it contains a vast amount of information which can be found in no other work, and the trustees of the hospital deserve the thanks of the profession and the public for the publication of the truly elegant volume.

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Books and Pamphlets Received.

Lecture on Orthopædic Surgery and Diseases of Joints. Delivered at Bellevue Hospital Medical College, Session of 1874-75. By Lewis A. Sayre, M. D., Illustrated by 274 wood engravings. New York: D. Appleton & Co. 1876. Buffalo: Herger & Ulbrich.

Extracts from the Ninth Annual Report of the State Board of Charities of New York State, relating to Hospitals for the Sick and Insane. By M. B. Anderson and J. C. Devereux. To which is appended a Report relating to the Management of the Insane in Great Britain. By H. B. Wilbur, M. D.

Remarks on Urethral Stricture, before the British Medical Association, Aug. 5th, 1875. By F. N. Otis, M. D. of N. Y. Reprint from *British Medical Journal*, Feb. 26th, 1876.

B U F F A L O

Medical and Surgical Journal.

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JUNE, 1876.

No. 11.

Original Communications.

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ART. I. *Inaugural Address Delivered at Albany, June 20, 1876, at the opening of the Seventieth Session of the Medical Society of the State of New York.* By the President, THOMAS F. ROCHESTER, M. D., of Buffalo, Erie Co., N. Y.

FELLOW MEMBERS AND DELEGATES :

We meet again after an interval of nearly seventeen months—it is hoped to the satisfaction and increased convenience of all, at the change in time of our annual assembling. This has been accomplished somewhat informally, and not quite in the manner contemplated by the Society. At the meeting in February, 1875, when the change was resolved upon, a committee was appointed to secure the necessary legislation. The committee took the requisite steps, and so reported while the Society was still in session, but the action thus initiated, appears not to have been carried to its legitimate conclusion, probably through the omission to act, on the part of the legislators to whom the bill was entrusted. In this dilemma, it was thought by the older members of the Society, resident in Albany, that the desired end could be accomplished by holding an informal meeting at the usual time, and adjourning to the third Tuesday in June, coupled with a resolution, that the annual meetings, should thereafter be held at

that date. For a more complete account of this action, you are referred to the minutes of the Secretary. It is hoped that the conclusion, that legislative action was unnecessary, was correct, but if there is any doubt upon the subject, that action may yet and should be taken.

It is customary for your presiding officer to refer to the general sanitary condition. It is with sincere thankfulness that the speaker is able to state, that no alarming epidemic and no unusual mortality has been noted. In certain localities scarlet fever and diphtheria have been prevalent, but have not extended over a large portion of the state. During the spring months of 1876 a catarrhal influenza of unusual duration and severity has prevailed, extending from the seaboard to the great inland lakes, and in fact over a large portion of the North American continent, resembling more closely the noted equine epidemic of a few years since, than that which usually attacks the human family. It was attended with extreme prostration, was tenacious in its hold, was but little influenced by quinine, antiseptics or opiates, and very distinctly required the free use of alcoholic stimulants and nutrients. Where it attacked the aged or those enfeebled by chronic disease, it often developed fatal lesions. In infants and quite young children it was in many instances attended with convulsions or prolonged nervous tremors. Not many years since an influenza epidemic was regarded as a fore-runner of cholera. It is most earnestly to be hoped that this belief will not be verified in this centennial year of 1876. Just preceding the outbreak and during the prevalence of this disorder, the barometer was unusually low, and it was notably observed, that the fluctuations of the disease corresponded with those of the mercurial tube. Thus affording an excellent illustration of the importance of statistical weather reports, and of the relation existing between atmospheric changes and sanitarian vital conditions. It has long been the desire of Gen. A. J. Myer to embrace observations pertaining to health and disease in the bureau of which he is the eminent head, and there is no doubt that they would be quite as valuable to the medical profession, as those now considered indispensable by navigators and agriculturists. Every effort should be made by scientists to

accomplish this object. We of Buffalo generally speak of him as Dr. Myer. We are proud to claim him as an alumnus of our Medical College. He was prominent as a surgeon in the army, when he invented the code of signals, which led to the formation of the Signal Corps, at the head of which he was necessarily placed, with a military position and title which transferred him from the medical department. As an evidence of his turn of mind and great ingenuity, it may here be mentioned, that when a student he formed an alphabet for the deaf and dumb, which has been adopted in many public institutions. By all means, let us do all that lies in our power to bring him back to his legitimate professional sphere, by encouraging the idea of a health with the weather bureau. Of the thereapeutical measures that now occupy the medical mind, decidedly the most prominent is that known as the apyretic treatment of disease. It is a subject demanding the gravest consideration. Advocated and practiced by prominent European practitioners, for the last three years, and nearly as long by a few of our own, it has within the last eighteen months gained a strong foothold in our midst, principally through the instrumentality of the translation of Ziemssen's Cyclopedia of the Practice of Medicine, put forth in the most attractive form, by the well known medical publishers, William Wood & Co., of New York. It is based upon the idea of the destructive effect of elevation of temperature upon nerve and muscle tissue, and certainly presents an immense number of clinical observations and data, sustaining the theory of the necrobiotic metamorphoses induced thereby, and also apparently demonstrating the wonderfully beneficial effect of various agents administered and applied solely with reference to their power in abating heat. First and foremost of these is water, in warm, cold and ice-cold baths—ice to the spine, ice to the abdomen and other parts of the surface—in short, water applied with a persistence and repetition such as Priessnitz never even dared to think of; next quinine at very short intervals, counted by minutes, in doses rivaling those of the malarious southwest, where the measure is not by grains, but by the teaspoonful; next arterial sedatives such as digitalis, aconite, veratrum, viride and gelseminum, and perhaps other

equally powerful and often dangerous drugs. Is it not best to be cautious about embracing too enthusiastically this new *therapeia*? Let us not be misunderstood—the dangers of extreme and continued pyrexia, in expressive Boston parlance—fever waste, are fully appreciated, and they should be averted by all reasonable measures, but it is respectfully suggested that in giving our whole attention to a product of disease, we may overlook or lose sight altogether of morbid conditions not less important and formidable. Let us give all credit to the medical savans of Germany—none have surpassed, few have equalled them in any department—but their enthusiasm may sometimes bias their reason. They have had the misfortune to produce a Hahnemann, with his infinitesimals—they may possibly err in the opposite direction, with their maximals. They make of quinine a panacea. It is stimulant, it is sedative, it is tonic, it is alterative, it is anti-phlogistic it is astrigent and constringent, it is apyretic, it is in fact of universal powers, properties and application. It is *totis prescribenda*. There is danger that this inestimable article of materia medica will be brought into discredit, from its indiscriminate and excessive use, and that while from the same causes, its price will be so enhanced as to put it beyond the reach of the poor (those who need it most), the temptation to adulterate it, will cause many dealers, to dispose of a very inferior article. During the late war, immense quantities were supplied to the army, in large part consisting of cotton fibre.

Among the many diseases for which quinine in full doses is now advantageously prescribed is inflammatory croup. This is particularly specified, to put on record as a matter of historic justice, the fact, that Dr. H. N. Eastman, of Owego, N. Y., and Dr. D. McFarland, of Williamsburg, L. I., each independently of the other, advised the same nearly twenty-five years since, in articles published in the *New York Journal of Medicine*. It will be remembered that a "Note on Salicylic Acid" was the title of a very interesting paper at our last meeting. It was treated from a purely chemical and scientific stand-point, and it must be a source of great gratification to its distinguished author—Prof. E. R. Squibb—to find that the deductions drawn by him have been

more than realized in practical use. As an antiseptic it is probably not inferior to carbolic acid, while it is free from its objectionable taste and smell, and is much more suitable for internal administration. As an apyretic it has developed remarkable qualities. By many it is regarded as a specific in acute rheumatism. In this disease, to the writer, its action and effect has appeared to be similar to that of propylamine. A new antiseptic, the sulpho-carbolate of soda, is now sub-judice. It is extravagantly lauded by several writers in recent British periodicals for its control of measles and scarlet fever. Among many meritorious recent publications, special attention is called to the carefully prepared statistical paper of Prof. E. L. Keyes, M. D., of New York, on "The Effect of Small Doses of Mercury in Modifying the Number of the Red Blood Corpuscles in Syphilis."* It appears to demonstrate that under its judicious use, either alone or combined with iodide of potash, that these are increased in number. A fact, if it prove to be such, at variance with the general opinion—and of the utmost importance, in relation to the saddest scourge with which the human race is afflicted, as the penalty of vicious indulgence.

Mention should also be made of the essay of Alex. Hutehins, M. D., of Brooklyn, N. Y., on the "Nitrite of Amyl," being his inaugural address as President of the Medical Society of the County of Kings. It is a full and thorough examination of the physiological and therapeutic action of this agent, and certainly offers good reasons for the careful employment of it, in many forms of severe and intractable spasmodic disease. It is so prompt, powerful and peculiar in its effects, that although its properties have been known for several years, its use has been limited, perhaps, from a wholesome timidity. Should it prove to be as safe as it is claimed to be effectual, it is a great boon to suffering humanity. There is much concurrent testimony respecting its instantaneous relief of angina pectoris. With respect to this, however, and to all active "remedies" of whatever class—the needed lesson of the day, as agreed by all thoughtful and experienced practitioners, is *caution*. We are fond of saying that much less medicine is given

*Reprint from Am. Jour. Med. Sciences for January, 1875.

now than formerly, and this is undoubtedly true as respects quantity, but there are some other considerations. Through the wonderful advances in physiology and pathology, and in accurate diagnosis and prognosis, medicine in these matters has become almost an exact science. Chemistry, too, has become so precise that from form it predicts properties, and penetrating into the hidden depths of nature, gives us the vital essence of material under the name of active principles. Pharmacy, the handmaiden of chemistry, prepares these alkaloids, these acids, these extracts, these active principles, with practised and dexterous hands, so that neither the eye, or the tongue or the nose is offended, and the therapist, eager and ambitious, with these at his command, and made wonderfully rapid, and energized through hypodermic application, seeks for an immediate and specific effect. He is as anxious to be as brilliant and as sure in his medication, as he is in his diagnosis—and here lies the danger—ardently as it is to be desired, it is feared that the time is far distant when that branch of our profession which embraces the science of *materia medica* can be called exact. While it is to be hoped that many specifics may be added to the few now known, there is also another side in the treatment of disease, and the physician is wise who thus questions himself—Does this patient require medicine? If so, how little will suffice? Not how much will he tolerate? Is not the last query propounded too often, does it not occasion many errors and mistakes?

In surgery we are not aware that there is anything of special moment to chronicle, but we regret to state that the bandage of Esmarch, from which so much of positive good has been derived, is not always innocuous—its use having been followed in several instances by fatal embolism of the pulmonary and other arteries.

Your attention is now invited to the question of the preliminary education of medical students. It is again brought to your notice by the special request of the Erie County Medical Society, at its fifty-fifth annual meeting in January, 1876. It will be remembered that in February, 1872, the Committee on Medical Education, of the Medical Society of the State of New York, endorsed the action of the American Medical Association in 1871—and that

among other resolutions embodied in their report, which was adopted, was the following: *Resolved*, "That no member of any medical organization represented in this society, be permitted to receive a student into his office until such student presents the certificate of a Board of Censors, showing his qualifications to enter upon the study of medicine." It is claimed that this is not observed, that it is ignored both by County Societies and by individual practitioners—that the Medical Societies of Erie county, and Ulster county, and the Lake Erie Medical Society, (an association formed from Chautauqua, Cattaraugus and Wyoming counties) are the only bodies who have tried to carry it into effect. Of these, the Erie County Medical Society is the pioneer, having at its semi-annual meeting in June, 1872, bound itself to conform to the requirements of the State Society—and since January, 1873, has, through its censors, worked diligently in this direction, although as they claim, with but partial success. By all means, let the State Report of 1872 be re-affirmed, and may each member of this society on his return home, make it his business to see that his County Society does its duty. Some censure has been passed by those whose zeal has outrun their discretion upon Medical Colleges in this matter. Some of the medical schools require a preliminary examination of every student proposing to matriculate, and all should do so. The examining board of course being selected from the respective faculties. Unless this is held as equivalent to an examination by a board of County Society Censors, discrimination against students from New York, in favor of students from the other States and from Canada, is unavoidable. Harvard, always wise and progressive, has shown us how to solve this difficulty by establishing a three years graded course of instruction, the school thus of necessity becoming the preceptor, and being responsible intoto for the pupil. Thus no loop hole is left by which, between school and preceptor, improper students may manage to glide into a degree. This, by no means, is meant to do away with the great advantage of having a private preceptor. It is hoped that no one will object to spending a few moments upon a subject, which, from its pre-eminent importance, can never become hackneyed. We refer to Hygiene. The State authorities are at length aroused, and

have instituted a series of sanitary measures. Among others a State Topographical Survey. The director of this survey, Prof. J. F. Gardner, has been invited to meet us at this meeting through the instrumentality of that earnest sanitarian, Dr. Elisha Harris, and will make some remarks pertaining to malarial areas. It is unnecessary to say that in this important work he will have the co-operation of the whole profession. The avenues of Hygiene are so many, and so broad, (and yet many of them so narrow, that they have to be searched out), that there is no loss for subjects. It is proposed at this time to bring only one point of the field before you, and that is, School Hygiene. This has interested the writer for many years, and you will pardon him if he presents his ideas, by reading to you some extracts from a public lecture delivered by him in Buffalo in February, 1869. "We are proud of our public schools; education is free to all, but it is not in every instance the unmixed blessing it seems. It is acquired at too great an individual risk.

"On the proudest avenue of this city is a three storied brick building. The room is heated with coal stoves, the ceiling is low, the light is but moderate, and there is no provision for ventilation. The seats are short, narrow and close together. Eighteen months ago a meeting of the residents of the district was convened, to consider the propriety of repairing the old, or of building a new structure. The Principal of the school, in reply to inquiries, stated that the room was always full; that three children had to sit where there was only room for two; that they were packed so tightly that it would be impossible for the children all to rise upon their feet at once; that there was no place to hang up their outer garments, even if they were wet, and that when school was dismissed, if a boy should drop his cap, he could not stop to pick it up, so great was the rush and the crush. The tax payers, a majority of them, buttoned up their pockets and voted to repair, one of them, a wealthy professional man remarking "that it was a much better school house than the one he had studied in." Not so, sir. The little country wooden structure, with its rattling windows, its gaping cracks and its broad-mouthed fire, place was infinitely superior.

“On the 9th of February, 1869, the School Committee of the Common Council, with the Superintendent of schools, made a tour of inspection. I make a few extracts from the report of the same: No. 7. “The primary department was found to be running over with little children, who had hardly room to breathe and stretch out their little arms.” No. 11. “It is a perfect hive of children.” No. 31. “The Primary Department has three hundred and forty scholars, but was calculated only to hold one hundred and eighty. They sit everywhere.” No. 15. “The Primary Department contained three hundred and twenty scholars yesterday.” From eight to twelve hundred feet of cubic air, is the amount of space that is required to be allotted to each individual in the U. S. Military Hospitals. In British India each jail prisoner has by legal enactment, six hundred and forty-eight cubic feet of air. In public school No. 15, each poor child has but fifty-six cubic feet of air. All the public schools are not like these, but that there should be one such is a burning shame. It is the *Primary Department*. This place where the child of five years old and upwards, the little darling, that yet needs a mother’s watchful eye and care, is subjected to such infamous trial and exposure. No wonder that scarlet fever, diphtheria, typhoid fever, and blood poisons of every description, are more or less prevalent. A large proportion of these dread disorders are generated in and propagated by our public schools, and the sordid man who votes against a tax for health and education, cannot guard his own spacious and luxurious abode against the malady his own avarice has helped to originate. But acute diseases are not the only results of this criminal crowding. Tuberculosis, scrofulous and brain affections, developed at various periods, may be traced, but too often, to the same source. Better for society, and better for themselves would it be, that these infants were not educated at all than at such risk.” The counterpart of this picture is to be found in every large city in our land. What is the remedy? No child under ten years of age should be sent to a public school, and every school district should have a competent and well paid medical director, who should devote himself thoroughly and conscientiously to the many hygienic duties of the position. It would not involve an increased

expense; on the contrary, it would be to the community a most wise and economical procedure. School Hygiene is often referred to in medical und secular journals, but so far, with little practical result. In this connection, the paper of Dr. David Webster, of New York, read at a late meeting of the American Social Science Association, is most apposite, demonstrating by very extended clinical examinations in various cities, the immense injury done to the visual apparatus by the prevailing surroundings and methods of school study. My brethren, cannot we, as representing the profession of the State, take some action which shall inaugurate and perpetuate a reform? If not, we cannot be held guiltless of this annual "slaughter of the innocents."

This society has now become so old and so large, that a sad duty necessarily always devolves upon its presiding officer—the mention of those of its members and delegates dead within the year. Of the former, Professor Charles B. Coventry, of Utica, who adorned our presidential chair in 1855, passed away at the ripe age of 74 years, on Feb. 23d, 1875, honored and distinguished in his profession; of gentle and winning manners, and especially noted for his kindly bearing toward his younger brethren.

On Dec. 3d, 1875, Prof. J. H. Armsby, and on Dec. 19th, 1875, Peter McNaughton, both old and esteemed residents of Albany, both highly eminent in their profession, and for a quarter of a century active and prominent members of this association.

In New York, in December, 1875, very suddenly, Dr. John R. Van Kleeck, a member of the board of trustees of the Physicians, Medical Aid Society, and much esteemed by his associates in every relation.

In Lansingburg, Jan. 19th, 1876, George H. Hubbard, earnest and zealous, and a great loss to the community and to this society.

In Auburn, March, 1876, James W. Wilkie, of most excellent repute, and held in great affection by his patients.

All of the above were permanent members. Of those who have served as delegates, the first on the list is Edward Delafield, of New York, one of the most eminent physicians that great city has ever boasted. He died on the 13th of February, 1875, aged 81 years. His funeral was solemnized at Trinity church, and, sad

and unwonted spectacle, his two brothers (septenarians) were his mortuary companions, all three, by a singular fortuity having died almost simultaneously.

Foster Swift, of New York, in his 42d year, with a manly heart, breathed out his gentle soul at Santa Cruz, May 10th, 1875. Son of Gen. Joseph Gardiner Swift, the first graduate of West Point, and grandson of Dr. Foster Swift, a Surgeon in the Revolutionary army, he could not help but be patriotic. He accompanied the 8th N. Y. Regiment to the late war at the first call to arms, as Surgeon, and his cool reply when summoned to surrender, at the disastrous battle of Bull Run, "Yes ! but wait until I tie this artery !" rang through the land.

Those of us who were present at our last meeting, remember the tall figure and dignified bearing of Ernest Krackowizer. He died at Sing Sing, Sept. 22d, 1875. He was one of those European scholars, who burnish the art escutcheon of the New with the lustre of the Old World.

F. W. Root, of Hamilton, Madison Co., N. Y., died May 8th, 1876, a modest man, and an excellent practitioner. There may be others, but this as far as is known to the writer, closes the list. Alas ! too long. The Committee on Necrology will have a painful but most honorable task, in writing the memorials of so many most excellent men. It has been suggested to the speaker by one of the ex-Presidents of the Society, that our influence and usefulness might be extended by an additional number of Vice-Presidents. It would certainly enable us to do honor to some of our associates, and the matter is submitted to you for consideration. The Committee of Publication deserve our thanks for the promptness with which they issued the last volume of Transactions, and also for the great improvement in its style and appearance, over that of its predecessors. It is submitted that an alphabetical list of permanent members, a directory in fact, would be more convenient than the present arrangement; it should appear in each volume. The official acts of the speaker have been very few.

On the 8th of February, 1875, he was consulted by the Secretary as to the M. H. Cash prize, the amount in the treasury to that fund being but \$50, while latterly, from accrued interests, \$100

had been paid. He advised that the interest of the fund, yearly and accrued, alone could be paid, there being no authority to make up the \$100, from the general funds of the society. If there is any question on this point, it should be settled that contestants may know, for just how much money, as well as honor they are competing.

On the 9th of June, 1875, he signed the State degree of Doctor of Medicine for Hermann Mynter, M. D., a native of Denmark, and graduate of the Medical School at Copenhagen, on the written certificate and recommendation of C. C. Wycoff, M. D., Harvey Jewett, M. D., and Caleb Green, M. D., State Censors, before whom Dr. Mynter had passed the requisite examination.

On the 23d of March, 1876, he received a communication from the President of the Kings Co. Medical Society, requesting him to write to the Senator of the 31st District, respecting a bill before the Judiciary Committee, "to protect physicians in suits for malpractice." Senator S. S. Rogers responded March 28th, 1876. "The bill of which you write, was reported unfavorably some time ago." The writer is informed by competent authority that no bill requiring bail for the costs of the suit, can be passed, it being impracticable.

On the first day of January, 1876, he received through the Secretary the subjoined communication:

INTERNATIONAL MEDICAL CONGRESS.

PHILADELPHIA, 1876.

All communications should be addressed to the Corresponding Secretary.

PHILADELPHIA, Dec. 13th, 1875.

To the President and Members of the N. Y. State Medical Society.

GENTLEMEN:

It is proposed that an International Medical Congress be held in this city, in September, 1876,—advantage being taken of the International Exposition celebrating the One Hundredth Year of our national existence, as a favorable occasion for assembling our professional brethren from all parts of the civilized world.

The main object of the meeting will be the discussion of topics belonging to the various branches of medical science.

The preliminary arrangements for holding the Congress have been entrusted to a commission composed of representatives from the different societies in this city. What this body has already done, will appear from the accompanying circular.

On behalf of the Commission, we respectfully request that you

will appoint delegates to represent you in the International Medical Congress in 1876.

It will facilitate the business of this Committee, if, upon the appointment of such delegates, you will cause to be transmitted to us a list of their names and addresses.

We have the honor to be, gentlemen, with much respect,
Your obedient servants,

L. D. GROSS, *President*.

D. G. BRENTON, *Corresponding Secretary*.

NOTE.—The proposed plan of organization entitles each State or Territorial Medical Society to the same number of delegates to the Congress, as the State or Territory has representatives in the Congress of the United States.

To this he responded by sending to Dr. Gross the following names:

Delegates from the Medical Society of the State of New York, to the International Medical Congress to be convened at Philadelphia, Monday, September 4th, 1876:

ALONZO CLARK.....	23 East 21st Street, New York.
FRANK H. HAMILTON.....	43 West 32d Street, New York.
B. FORDYCE BARKER.....	85 Madison Avenue, N. Y.
EDWARD H. PARKER.....	Poughkeepsie, N. Y.
THOMAS HUN.....	Albany, N. Y.
FREDERICK HYDE.....	Cortland, N. Y.
HENRY W. DEAN.....	Rochester, N. Y.
JOHN P. GRAY.....	Utica, N. Y.
L. I. TEFT.....	Syracuse, N. Y.
J. V. P. QUACKENBUSH.....	Albany, N. Y.
JAMES P. WHITE.....	Buffalo, N. Y.
GEORGE BURR.....	Binghamton, N. Y.
S. O. VANDERPOEL.....	Quarantine, N. Y.
G. A. DAYTON.....	Mexico, Oswego Co., N. Y.
WM. C. WEY.....	Elmira, N. Y.
C. R. AGNEW.....	19 East 39th Street, N. Y.
B. F. SHERMAN.....	Ogdensburg, N. Y.
E. M. MOORE.....	Rochester, N. Y.
FRANCIS BURDICK.....	Johnstown, Fulton Co., N. Y.
GEO. J. FISHER.....	Sing Sing, N. Y.
HARVEY JEWETT.....	Canandaigua, N. Y.
ELLSWORTH ELIOT.....	48 West 36th Street, N. Y.
JULIUS F. MINER.....	Buffalo, N. Y.
W. H. BAILEY.....	Albany, N. Y.
E. R. HUN.....	Albany, N. Y.
C. H. PORTER.....	Albany, N. Y.
J. FOSTER JENKINS.....	Yonkers, N. Y.
A. M. VEDDER.....	Schnectady, N. Y.
H. D. DIDAMA.....	Syracuse, N. Y.
E. R. SQUIBB.....	Brooklyn, N. Y.
ALEXANDER HUTCHINS.....	Brooklyn, N. Y.
H. D. VOSBURG.....	Lyons, N. Y.
AUSTIN FLINT, JR.....	14 West 33d Street, New York.
JOHN D. BUTTON.....	Auburn, N. Y.
THOMAS M. FLANDREAU.....	Rome, N. Y.

All have consented to serve except Dr. Alonzo Clark, who was obliged to decline, and Dr. Thomas Hun, who is absent in Europe. Dr. J. C. Hutchinson, of Brooklyn, was nominated in place of Dr. Hun. The vacancy left by Dr. Clark has not been filled. Dr. Frank H. Hamilton has been designated as Chairman, Dr. Clark having been previously tendered the position. It is unnecessary to state of how great interest and importance this International Medical Congress must be. It is hoped that all the delegates from the State Medical Society will be able to attend, and while the speaker would not presume to influence in any way their actions, he trusts that it will, among other advances, favor a uniform system of weights, measures and symbols, throughout the medical world.

It remains, gentlemen, for the speaker to express to you his cordial and heart-felt thanks for the high honor you have conferred upon him, in selecting him to preside over your deliberations. Totally unversed in parliamentary usages, he begs for your kindly consideration and assistance in the discharge of the duties belonging to his position. The Society is now organized and ready for the transaction of business.

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ART. II.—*Hemorrhage Following Miscarriage, and its Treatment by Intra-uterine Styptic Injection, with Report of a Case.* Abstract of a paper read before the Livingston Co., Medical Society, by W. W. POTTER, M. D. of Mt. Morris, N. Y.

I was called in haste, Aug. 30th, 1873, at 7 o'clock P. M., to see Mrs. S——, aged 39, and who resided about two miles away. Knowing her to be between five and six months advanced in her 7th pregnancy, (having attended her two months previously when abortion was threatened) no time was lost in reaching her bedside, where she was found in the following condition to wit: Pulse 80, full and regular,—no pain, no hemorrhage.

Placing my hand over the abdomen, it was discovered to have diminished in size, and then she stated in explanation that she had felt pains irregularly for a day or two, and that in the afternoon of the day in question, they began to assume the regularity of labor-pains, and had so continued up to an hour or so prior to my

visit. A digital examination revealed a fœtus lying in the vagina which I immediately removed.

The uterus being completely inert the attempt was made to restore its contractile power, by the use of cold, grasping, ergot, etc. Up to this time there had been no hemorrhage, but, not wishing to leave the patient with the placenta undelivered, I endeavored to reach it with the hand but was unable to do so. After repeated trials I determined to pack the vagina and await events.

The vagina was accordingly filled with small, soft sponges attached together by means of a string. I left the patient with directions to be summoned if hemorrhage should occur. At 10½ o'clock P. M., I was called in great haste and found the patient flowing to an alarming extent. I removed the packing from the vagina and cleared out the clots, but was still unable to reach the placenta. There had been no pain since my previous visit—in short complete inertia of the uterus. I re-tamponed as thoroughly as possible, which served to check the hemorrhage until 2 o'clock A. M., when it gushed forth again in all its horror. The patient was now placed in position, and my friend Dr. Joslyn, who had been summoned, administered ether and then grasped and held the uterus low down in the pelvis. I now succeeded in touching the lower border of the placenta with the fingers. Seizing the margin of the placenta within reach with a pair of uterine dressing forceps I made traction and brought away a small portion. Becoming satisfied that the placenta was adherent throughout a considerable portion of its surface, I repeated my efforts to detach it persistently, and at the end of an hour I had the satisfaction of bringing it away with the exception of some nodular shreds still clinging to the uterine walls. Hemorrhage had continued until the patient seemed on the verge of dissolution, and I submitted to my colleague the propriety of injecting the uterus with an iron styptic. He assented and I injected about one drachm of a sol. ferri persulphatis in water—1 part to 6.

The effect was magical—the mouths of the bleeding vessels were sealed, and the uterus, which had been inert for twelve hours, contracted firmly under the stimulus of the injection. The pain at once became severe, but from that moment the hemorrhage had

ceased and it never returned. The uterine colic was relieved by morphia administered sub-dermically, and we left our patient at 5 o'clock A. M., in a condition of tolerable comfort. Convalescence was rapid, and complete restoration to health soon followed.

The patient again became pregnant in July of the present year, and in October she was thrown from her carriage and quite severely shocked. Abortion followed, but without any unusual attending conditions.

In view of the interest attaching to the treatment of post-partum hemorrhage by intra-uterine styptic injections, I have reported this case, believing that life was saved by the timely employment of this method. I have no doubt that the uterus contracted as a direct result of the injection, thus closing the mouths of the bleeding vessels, and from that moment the patient was safe.

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ART. III. — *Surgical Cases.* By CHARLES C. F. GAY, M.D., Surgeon to the Buffalo General Hospital.

INGUINAL HERNIA, WITH UNUSUAL STRANGULATION—OPERATION. — On November 1st, 1874, I was invited by Dr. Hauenstein to see with him Mr. —, a German, aged 45 years, who was suffering with what appeared to be strangulated inguinal Hernia.

The following history of the case was obtained: The Hernia was 21 years old. Truss had never been worn. The bowel sometimes was returned into the abdominal cavity, but usually was allowed to remain within the scrotum, as no inconvenience resulted therefrom until now. Three or four days ago it became troublesome. The whole of the scrotum became swollen, inflamed, and consequently painful. No passage could be obtained from the bowels; there was occasional vomiting. Timely and judicious attempts by taxis, to reduce the hernia had been made in vain by his medical attendant.

The scrotum was held up by suspensory bandage, and a lotion of acetate of lead had been used, which had the effect to allay the inflammation. A cathartic had been administered, which neither

operated nor aggravated the symptoms. Vomiting was not ster-
coraceous; there was no peritoneal tenderness nor inflammation;
pulse 108 per minute.

The protruding bowel extended to the fundus of the scrotum,
and was two inches or two inches and a half in diameter.

Passing my thumb and forefinger up along its course, I found
the tumour terminates before reaching the external abdominal ring,
which is evidence that the stricture does not exist at the ring. I
next determined to ascertain the nature of the contents of the
tumour, whether fluid or solid, for this purpose made use of the
aspirator and drew off only a few drops of fluid.

An operation was then decided upon and made at once with the
assistance of Drs. Häuenstein and Bartow.

Chloroform was given at first, and its effect maintained after-
wards by ether. Upon cutting down to the ring I found that I
could easily pass my finger into the abdominal cavity. There was
certainly no stricture there.

Following the downward course of the intestine I came upon
the stricture which was in the sac, and three inches below the ex-
ternal ring.

The stricture was very firm and was divided by cutting from
above downwards. The sac was then laid open and its walls found
to be a quarter of an inch in thickness. Adhesions extended down
into the scrotum; were broken up, and the bowel returned into
the abdominal cavity. Although the operation would have been
completed after division of the stricture, it was thought advisable
to return the extruded bowel rather than allow it to remain
where, indeed, it had been immured in safety for many years. Its
appearance was not at all inviting. There was evidence of ap-
proaching gangrene, the color was bad and the intestine was cold
and fully impacted with fecal matter, which gentle pressure failed
to unload. In 48 hours the patient succumbed—autopsy not al-
lowed.

FEMORAL ANEURISM SO CLOSELY SIMULATING FEMORAL HERNIA
AS TO RENDER DIAGNOSIS DIFFICULT.—On the eleventh of March
last, (1876) I visited at Corfu, Genesee county, Mrs. D., aged 67
years, who was reported to have strangulated femoral hernia.

The following history I obtained from her medical attendant:

Four years ago a small tumour was first observed just below the flexure of the thigh toward the inner aspect. When the patient lies down the tumor disappears to reappear again when standing up. It was never until the present time, painful or troublesome. A truss had never been worn.

Three days before my visit the tumor had suddenly enlarged to the size of a pullet's egg, and had become painful; scarcely any nourishment could be retained; a cathartic, repeated, with repeated enemas, had failed to open the bowels, and this was the condition of the patient when I saw her. On examination of the tumour, I was wholly unable to say positively that it was or was not hernia. The tumour occupied the position below Poupart's ligament where femoral protrusion occurs, yet rather lower down upon the thigh than is usual for hernia. It was over the femoral artery, yet there was no pulsation in the tumour either direct or transmitted. Taxis had been employed but the tumour was now so tender to the touch that any attempt at manipulation gave great distress.

Ether was now administered, when, assisted by Drs. Congar, and Bartow, I cut down upon the tumor, passed a ligature around the superficial femoral artery—without tying it—in order to guard against accident from hemorrhage, then dissected around the tumour when it was found that the artery ran into it, and was continuous with it below. The ligature was then tightened, another one placed upon the artery below the tumour, the sac was freely incised and the aneurisual clot turned out. The wound was brought together by interrupted silver sutures and the case progressed to a favorable termination.

The wound however did not close by primary union, but opened on removal of sutures and healed by granulation.

The ligatures came away on the twenty-first day.

The method employed in this case it may be observed, was that of Antyllus, modified.

DISLOCATION OF THE LEFT FEMUR INTO THE FORAMEN THYROIDÆUM.—REDUCTION BY THE REID METHOD OF MANIPULATION.—By request of Dr. Diehl, I visited, along with himself and Dr.

Johnson, on August 4th, 1875, Mr. B——, aged 51 years, a man full six feet in height with good muscular developement. During a scuffle his feet slipped laterally, separating his limbs widely apart, in which attitude he fell across a chair and down upon the floor, from which he found himself unable to rise without assistance. I saw him soon after the accident; extending the two legs, scarcely any difference was perceptible in their length. The luxated limb was perhaps a trifle longer than its fellow. The toe was everted; nobility of the limb was not impaired; by rotating the limb, the head of the femur was felt in the obturator foramen.

Chloroform was administered, and after two failures at reduction, the third trial was successful and was accomplished in the following manner:

The leg was flexed upon the thigh and the thigh flexed upon the body, and carried over the opposite limb. In this position the head of the femur could be felt to move in the foramen, but when rotating the limb outward the head could not be felt, but whenever the reverse manœuvre was made, namely: rotation *inward*, the head was felt to move outward and backward toward the acetabulum, when, by quickly extending the limb the head of the bone was made to pass into its socket.

But a very few minutes were occupied in this last effort at reduction.

The limb was secured in position by appropriate bandaging. Much discoloration of the integument existed over and around the hip for a few days, but the patient made a good recovery.

Should diagnosis be difficult in a luxation of the femur into the foramen, it may be made sure by feeling for the head of the bone through the rectum.

Reduction was made in less than thirty minutes, and was accomplished by the joint efforts of Drs. Conrad Diehl, Chas. H. Johnson and myself.

ART. IV.—*Abstract of the Proceedings of the Buffalo Medical Association.* Tuesday Evening, April 4th, 1876. E. N. BRUSH, M. D., Secretary.

The President, Dr. Gould, in the Chair.

Present—Drs. White, Rochester, Miner, Phelps, O'Brien, Little, Diehl, Brecht, Fowler, Howe, Bielby, Barnes, Coxe, Briggs, Samo, Macniel, Mynter, Van Peyma, Gay, Trowbridge, Hebenstreit, Hopkins, Bartlett and W. W. Miner. By invitation, Drs. Baker, Shannon and Elliott.

The minutes of the Secretary were read and approved.

The annual report of the Treasurer, Dr. Fowler, was received, and referred to an auditing committee consisting of Drs. Phelps, Gay and Barnes, who subsequently reported the accounts correct.

The Sanitary Committee appointed at the February meeting, reported through Dr. Barnes. On motion of Dr. Rochester, the report was placed on file.

The application for membership of Drs. S. S. Greene, S. G. Dorr, W. C. Earl and W. H. Slacer were taken from the table, and they were unanimously elected members.

The President appointed as Essayist for the May meeting, Dr. E. C. Coxe.

DR. HOWE then presented a post mortem and a clinical specimen of that form of intra-ocular tumor known as glioma.

The first was from a child five years old, whose parents noticed, in the fall of '73, that the pupil of the right eye was enlarged and of a yellowish color. The vision was then lost. This patient was seen in consultation with Dr. Rochester, on the tenth of April, '75. At that time the eye was prominent, the sclerotic being much distended. The cornea was clear, and behind, instead of an anterior chamber, the iris and lens were pressed directly against it. The pupil was widely dilated, and through it was seen a bright yellowish reflection. The patient suffered continual pain and was much emaciated. The diagnosis being agreed upon, the eye was enucleated, and the growth found to occupy its posterior half. Its malignant character as a glioma retinae was shown by the microscope. In spite of its removal however, the other eye became affected, the patient gradually sank, and died on the twelfth of

June following. A post mortem examination of the remaining eye shows a condition similar to that already described in the right.

The other case is also that of a little girl, of six years. The tumor was first noticed at the outer margin of the iris, and now, by looking around the edge of the pupil, it can be readily seen without the aid of ophthalmoscope or any other instrument.

(The question of differential diagnosis between glioma and other tumors was then discussed.)

These growths are of interest.

1st. From their extreme infrequency.

2d. From the comparative ease with which they can be recognized in their more advanced stages by the yellowish reflex.

3d. From their fatal termination, which makes the removal of the eye advisable, simply for the sake of prolonging life, and hardly with the expectation of saving it.

DR. MYNTER read the report of a second case of aspiration of the pleural cavity for effusion of acute pleuritis. (See page 383 May No.

DR. ROCHESTER said that sufficient time had not elapsed to say whether the effusion would return or not, and therefore the case could not be accepted as a cure of pleuritis by thoracentesis. He referred to a case which had come under his observation some time since. The patient, a gentleman, had had pleuritic effusion three times in two years; twice on the left side, once on the right. The recovery was perfect, but it was not promoted by the ordinary treatment, the patient was put upon tonics, cod liver oil, iron, etc., under which, improvement was marked and rapid.

DR. S. S. GREENE said that he was very much pleased to hear Dr. Mynter's paper. That he was the gentleman who had advised Dr. Mynter's patient to defer having the operation performed. He had advised the employment of other, and less radical means for relief, saying to the patient that the operation, in the condition which he saw, was not necessary, as he was suffering from no dyspnœa or other unpleasant symptoms. The man came to him for treatment, having the appearance of one who was in the habit of drinking to excess, he moreover understood that the patient

had recently been under treatment for general anasarca, from which he had not wholly recovered. If the patient had been in danger from too great pressure upon the lung, or had been suffering from great dyspnœa he should have advised the employment of the aspirator, but unless these conditions were present he should prefer to use other means.

DR. BARNES said that he had occasion to assist a gentleman, a few days since, in tapping the chest on the fifth day, of acute pleuritis. The operation, though affording relief at the time, was followed by a rapid return of the effusion.

DR. MINER wished to call attention to the fact, that these cases even in the most extreme instances, would recover. He cited the case of a boy, aged about fourteen, who came under his care for pleuritic effusion. When seen the effusion had become purulent and had pointed in the side. The effusion was drawn off by an ordinary lancet, the incision being made in the most dependent portion of the swelling. The recovery of the patient was rapid. He had seen, in an extended experience, several extreme cases of this character, and had been surprised frequently, at their favorable termination. He did not think that in the early stages of pleuritic effusion, the danger to the patient or the prospect of hastening his recovery were sufficiently well established to warrant the use of the aspirator.

DR. ROCHESTER moved that as the hour was late the subject be laid upon the table until the next meeting. Carried.

DR. WHITE said that he had a case to lay before the Association, which was to him full of interest. The case was one of non-puerperal hemorrhage after the menopause, there were no indications of malignant disease. The patient was a widow aged forty-nine, who had never borne children. Two or three years ago he had treated the patient for slight hemorrhage accompanied by a small amount of ulceration of the os. Was sent for again last summer to see the patient, but through a mistake of the messenger did not find her, and did not see her again until February 6th. She was found very much exsanguined from repeated hemorrhages which had occurred for some months. The profuse hemorrhage then present was controlled by the tampon. The hemorrhage did

not again recur, but was succeeded by a profused watery or serous discharge, such as would be expected from polypoid growths. On the 15th and 16th of March, tents were introduced, the os dilated and the uterus measured, its cavity being found to be three inches in length. Dr. Coxe anæsthetized the patient, and with the curette of Récamier, Dr. White removed from the cavity of the uterus what were apparently small polypoid growths springing from the mucous membrane. On that evening and the next day the patient was in a comfortable condition, but sank and died in a day or two after. There were none of the ordinary symptoms of peritonitis nor did the patient suffer from much pain. A *post mortem* examination was made by Drs. Folwell, Coxe and Fowler, and the uterus, which they had removed, was presented for inspection. The body of the uterus was found to be soft and putty like and had a ragged perforation at the fundus. The uterus seems to have undergone a process of fatty degeneration. The neck and os were comparatively free from disease, and were firm and elastic while the body and fundus were almost as soft as tallow, as could be seen by an examination of the specimen. A minute detail of the case after the operation was furnished by Dr. Coxe, who was in attendance until the termination of the case.

The only disease reported prevailing in the city to any general extent was a severe epidemic of influenza.

DRS. WHITE, BRIGGS and VAN PEYMA were appointed a nominating committee to select officers for the ensuing year. They brought in the following ticket, which was unanimously elected.

For President, Dr. C. C. WYCKOFF,
For Vice-President, Dr. E. R. BARNES,
For Secretary, Dr. E. N. BRUSH.
For Treasurer, Dr. JOSEPH FOWLER,
For Librarian, Dr. J. B. SAMO.

On motion the Association adjourned.

MISCELLANEOUS.

Proceedings of the Association of the Representatives of American Medical Colleges, held at Philadelphia, June 2d and 3d, 1876.

A convention of representatives of numerous medical colleges of the United States was held in the hall of the Jefferson Medical College, of Philadelphia, June 2d and 3d, 1876, in pursuance of the following call:

LOUISVILLE, KY., May 15, 1876.—

Following a general correspondence with the various medical colleges of the United States, the undersigned issued this call for a convention, to be held in Philadelphia, on Friday, June 2, 1876, four days in advance of the American Medical Association. The object of the convention is to consider all matters relating to reform in medical college work.

That decided results may be reached, the faculty of each college is requested to send one or more delegates, clothed with *plenary* powers to determine final action on every question.

Should any college find it impracticable to send a representative, it is hoped that it will set forth fully by letter to the convention the views it may hold touching the suppression of existing evils and methods of practical improvement.

Officers of the following colleges have informally signified their hearty approval of the movement:

Jefferson Medical College, College of Physicians and Surgeons, N. Y., Bellevue Hospital Medical College, Ohio Medical College, Miami Medical College, Rush Medical College, Detroit Medical College, Louisville Hospital Medical College, Keokuk Medical College, Cleveland Medical College, Starling Medical College, Medical Department of Georgetown College, Medical Department of Columbia University, Long Island College Hospital, Medical Department of Syracuse University, Evansville Medical College, Indiana Medical College, Medical Department of University of Nashville, Atlanta Medical College, Mobile Medical College, Savannah Medical College, Augusta Medical College.

The convention will be called to order in the hall of the Jefferson Medical College at 11 o'clock A. M. on the day named above.

J. B. BIDDLE, M. D., Jefferson Medical College.

WM. H. MUSSEY, M. D., Miami Medical College.

JOHN. T. HODGEN, M. D., St. Louis College.

J. ADAMS ALLEN, M. D., Rush Medical College.

W. T. BRIGGS, M. D., Med. Dep't University of Nashville.

J. M. BODINE, M. D., Med. Dep't University of Louisville.

At the hour named the following representatives assembled:

Jefferson Medical College—Prof. J. B. Biddle and Prof. S. D. Gross.

Medical Department University of Pennsylvania—Prof. R. E. Rogers.

College Physicians and Surgeons of New York—Prof. Edward Curtis.

Medical Department University of Louisville—Prof. L. P. Yandell, Jr., and Prof. J. M. Bodine.

Hospital College of Medicine of Louisville—Prof. J. A. Larabee and Prof. T. C. Wilson.

Long Island Hospital Medical College—Prof. J. H. Raymond.

Medical Department University of Iowa—Prof. E. Clapp.

College of Physicians and Surgeons Syracuse University—Prof. H. B. Wilbur and Prof. Van Dyne.

Chicago Medical College—Prof. L. Curtis.

Medical Department University of Georgia—Prof. E. Geddings.

Indiana Medical College—Prof. T. B. Harvey and Prof. L. D. Waterman.

Medical Department University of Wooster—Prof. W. J. Scott.

Cleveland Medical College—Prof. J. H. Bennett and Prof. Heims.

Detroit Medical College—Prof. E. W. Jenks and Prof. L. Connor.

Starling Medical College—Prof. S. Loving.

Medical Department University of Vermont—Prof. H. D. Holton.

St. Louis Medical College—Prof. J. L. B. Alleyne.

Atlanta Medical College—Prof. W. F. Westmoreland.

Medical Department University of Nashville—Prof. W. T. Briggs.

Medical Department Vanderbilt University—Prof. T. A. Atchison.

Missouri Medical College—Prof. A. P. Lankford.

Keokuk College Physicians and Surgeons—Prof. J. J. M. Angier.

Columbus Medical College—Prof. J. F. Baldwin.

On motion of Prof. Yandell, Prof. J. B. Biddle was elected President of the convention, and on motion of Prof. Bennett, Prof. Leartus Connor was elected Secretary.

On motion of Prof. E. Curtis, it was

Resolved, That the action of the convention shall not be considered binding upon the colleges represented unless endorsed by their respective faculties.

On motion of Prof. Gross, it was

Resolved, That a committee be appointed to submit business for the consideration of the convention, to report at the afternoon session.

The chair appointed as this committee, Profs. Bodine, Gross, Geddings, Holton and Scott.

The convention adjourned until 4 P. M.

Pursuant to adjournment, the convention reassembled at 4 P. M., the President in the chair.

The minutes of the last meeting were read and approved.

Prof. Bodine, from the committee to prepare business for the convention, reported the following questions for its consideration:

1. Shall the beneficiary system, with its present abuses, be condemned or endorsed?

After discussion, on motion of Prof. E. Curtis, the following preamble and resolutions were adopted with reference to question first:

Whereas, The practice of reducing or remitting in individual cases the established fees of a college has the objectionable feature of discriminating between students who may be equally deserving, and opening the door to possible gross abuses; therefore

Resolved, first, That this convention regards the above privilege as one to be depreciated in general, and, if put into practice at all, to be exercised both rarely and reluctantly, and only in unusual circumstances, and after unsolicited application by proven deserving candidates.

Resolved, second, That anything like a wholesale system of such reduction or remission of established fees, or any open solicitation of recipients of such favors be regarded as in the highest degree improper, and that any college indulging in such practices deserves to forfeit its place on the *ad eundem* list of medical colleges.

Question 2. Shall two consecutive courses of lectures in one year entitle students to become candidates for graduation?

On motion of Prof. E. Curtis, it was

Resolved, That it is the opinion of this convention that no two consecutive sets of lecture tickets shall be regarded as fulfilling the usual pre-requisites of instruction for graduation, where the time between the beginning of the first course and the end of the second is less than fifteen months.

Question 3. Shall any faculty under any circumstances issue a diploma not bearing the graduate's name.

On motion of Prof. Waterman, it was

Resolved, That no medical faculty should issue a diploma not bearing the graduate's name.

It was ordered that the meetings of the convention shall be at 10 A. M. and 4 P. M. On motion, the convention adjourned.

The convention reassembled on Saturday, June 3d, at 10 A. M., the President in the chair.

The minutes of the previous meeting were read and approved.

On motion of Prof. L. P. Yandell, Jr., the regular order of business was suspended, and communications were read from the faculties of the following medical colleges: Louisville Medical College, Kentucky School of Medicine, Evansville Medical College, Rush Medical College, Medical Department University Louisiana,

Medical School of Harvard University, Savannah Medical College, Cincinnati College of Medicine and Surgery, Medical College of State of South Carolina.

On motion of Prof. Atchison, these communications were placed on file.

Question 4. Shall this convention resolve itself into a permanent organization?

On motion of Prof. Atchison, it was

Resolved, That the question be referred to a committee of five, to report at the afternoon session.

The chair appointed as this committee Profs. Atchison, L. Curtis, E. Curtis, Yandell and Scott.

On motion of Prof. Rogers, the President and Secretary of the convention and Prof. Atchison were appointed a committee on publication.

Question 5. Is there any reason why the customary diploma fee shall be abolished?

On motion of Prof. Rogers, it was

Resolved, That it is the sense of the convention that the diploma fee should not be abolished.

Question 6. Is it advisable to adopt a graded course of study?

On motion of Prof. Bodine, the following preamble and resolution were adopted in reference to this question :

Whereas, A knowledge of the elementary branches of medicine should precede a study of the practical branches.

Resolved, That, in the hope of inducing students to prolong and systematize their studies, this convention recommends to all medical colleges to offer to students the option of three courses of lectures, after a plan similar to the following: Students who have attended two full courses of lectures on anatomy, chemistry, materia medica and physiology, may be examined upon any of these subjects at the end of their second course. During their third course such students may devote themselves to the lectures upon the theory and practice of medicine, surgery, obstetrics and diseases of women and children, upon which subjects only they shall be examined at the final examination for the degree of M. D.—their standing, however, to be determined by the results of both examinations.

On motion, adjourned till 4 P. M.

The convention re-assembled at four P. M., the President in the chair. The minutes of the last meeting were read and approved.

Prof. Atchison, from the committee to whom the subject of permanent organization was referred, reported the following resolutions:

Resolved, 1. That this *convention* now proceed to form a Provisional Association of American Medical Colleges, under its present officers.

Resolved, 2. That when the Association adjourns, it shall adjourn to meet at the call of its President.

Resolved, 3. That the various medical colleges be invited to take into consideration the project of forming, at the next meeting of this Provisional Association, a permanent Association of American Medical Colleges.

Resolved, 4. That for the furtherance of this object, a committee of three be appointed at this meeting to confer by letter with the various colleges, and invite their views on the proper object and plan of such proposed organization; and upon the receipt of the same, to draft a constitution and by-laws for a permanent Association, to be submitted at the next meeting of this Association.

Resolved, 5. That the advisory resolutions upon matters of college policy passed by this convention be printed and forwarded to all medical colleges in the United States for their consideration.

The chair appointed as committee to carry out the foregoing resolutions Prof. T. A. Atchison, Prof. Edward Curtis and Prof. L. P. Yandell, Jr.

These resolutions were adopted, and the convention resolved itself into the Provisional Association of American Colleges.

Question 7. Is it proper for a regular college to have any kind of alliance with homeopathy?

On motion of Prof. Atchison, it was unanimously

Resolved, That in the opinion of this Association, medical colleges ought not to recognize or hold fellowship with any school or its alumni in which irregular medicine is taught as a part of the curriculum.

Question 8. Can college fees be made uniform?

On motion of Prof. Geddings, this question was referred to a committee of five, to report at the meeting of the Association to be held in 1877.

The chair appointed Profs. Geddings, Gross, Angier, E. Curtis and L. Curtis, this committee.

On motion of Prof. Biddle, the following resolution was unanimously adopted:

No degree in medicine should be conferred, under any circumstances, except after an examination in person of the candidate upon all the branches of medicine.

On motion of Prof. Atchison, the thanks of the Association were tendered to the President for the able and impartial manner in which he had discharged the duties of the chair.

On motion of Prof. Yandell, the thanks of the Association were tendered to the Secretary for his efficient services.

On motion of Prof. Larabee, the thanks of the Association were tendered to Jefferson Medical College for the use of the hall and other courtesies.

On motion, the Association adjourned to meet at the call of the President.

J. B. BIDDLE, M. D., President.

LEARTUS CONNOR, M. D., Sec'y.

The Twenty-seventh Annual Meeting of the American Medical Association.

The twenty-seventh annual session of the American Medical Association was held during June 6, 7, 8 and 9, at Horticultural Hall, Philadelphia. At eleven o'clock on the morning of Tuesday, June 6, the meeting came to order, the President, Dr. J. Marion Sims, occupying the chair, the Vice-Presidents, Drs. Samuel Lily, of New Jersey, Wm. Pinkney, U. S. N., and S. D. Seelys, of Alabama, being upon the platform. Rev. Dr. E. R. Beadle offered a prayer, at the conclusion of which a graceful and eloquent welcome was extended to the visiting delegates by Dr. Wm. Pepper, Chairman of the Committee of Arrangements.

The President then read his address. After congratulating the delegates on the privilege of meeting here in this Centennial year and joining in the Centennial celebrations, the speaker said that this city is particularly interesting to this Association, for here it, twenty-nine years ago, was organized. Its first meeting was held in Baltimore, in 1848, when the beloved Chapman was elected President.

The speaker then traced the progress of the society, alluding to the last meeting in this city in 1872, when so much time was lost in the discussion of the woman question. But now, if any woman, entering the medical profession, rises to such a position as to be sent as a State or County delegate, the Association is bound to receive her; and so too with colored physicians.

The President then entered upon the discussion of the various forms of medical education in this country, and the code of ethics.

The three points in the code of ethics upon which he especially dwelt were, the portions relating to advertising, to the patenting of medical instruments, and to the secrecy of the consultation-room. He did not absolutely affirm as his desire that all restrictions upon advertising should be abolished, but certainly led his hearers up to the surmise that such abolition would, in his opinion, be best. He called attention to the arbitrary nature of the lines drawn, and to their variance in different countries and at different times in the same country. Thus, not many years since, a physician who put his office-hours upon his window-sill would have been sent to Coventry by his compeers; but now the practice has become common. Again, in the United States, every physician puts his name and occupation upon his window and door, but none dare advertise; whilst in France the doctor is prohibited from marking his door or window by a sign-board, but is allowed to advertise in other methods. Upon the hardship of the denial of the right of the physician to obtain patents upon instruments, Dr. Sims dwelt at considerable length. He cited instances where

men had worked in the face of poverty and of all manner of discouragements for years, and their success when it had finally been achieved all went, not for the good of the inventors' families, not for the good of the sick and suffering patients, but for the building up and enriching of the—instrument-maker. He detailed the case of a friend of his who, broken in health, without means for supporting his family, had asked what he should do. The answer, which is at present being acted upon, was, "Leave the profession; become an instrument-maker; it is better than to stay in the profession and attempt to withstand public opinion, unjust and outrageous although it be." Patent and proprietary medicines, such as McMunn's Elixir, are used in large amounts by members of the regular profession in good standing, ay, by the very men who would thus deprive the medical inventor of the right possessed by every cursed son of Adam,—to eat bread in the sweat of his brow. Privacy in consultation was denounced by Dr. Sims as a thing which existed in name rather than in reality, and which ought not to exist at all. An honest man, he thought, would never have reason for hiding that which he had done and said.

On the whole the code is not up to the standard of professional honor, and at the same time hampers the profession in many ways. It is violated every day, not only by the rank and file, but also by those high in authority; and who dare call them to account? This is the first time that the validity, the constitutionality, of the code has been questioned; but he did not think it worth while that a committee should be appointed to investigate and alter it. Let the code stand as it is, but let it become a dead letter; honorable men do not need it to influence their actions; dishonorable men will not regard it or any other. Let it be the object of the American Medical Association to educate its members up to that higher code, that unwritten law, which is the universal standard of England.

The speaker then discussed syphilis, and urged with great emphasis and force the desirability—more than that, the necessity—for legislation which shall meet and combat this terrible scourge in a scientific and sufficient manner. Some startling statistics regarding prostitution on the Pacific Coast were given; and the speaker concluded his remarks on this subject by declaring that never must the evil be fought by licensing prostitution, and thereby upholding and cherishing vice, as obtains in Europe; a declaration which was received with loud applause.

The plan he had to suggest was one which did not recognize vice, and which yet would do away with the scourge syphilis. The sea is the great highway for syphilis, and sailors are the great carriers of the poison. A strict quarantine should be enforced; every steerage passenger and every sailor should be rigidly inspected, and, when the disease is found upon them, should be quarantined.

We want a system which will prevent the importation of disease

from abroad, as well as one which will prevent its spread in our midst. The boards of health in cities, suggested the speaker, should be given the same powers to ferret out and to treat diseases of this nature as they now have in dealing with cholera or small-pox.

In conclusion, Dr. Sims said, in this our Centennial year, let us put far from us all sectional feelings, have nothing to do with any outside issues, and confine ourselves to the strict business of the Association.

The following day, after the appointment of a committee on examinations, and a report from the Judicial Council, Dr. R. C. Kedsie, of Lansing, Michigan, read a paper on Natural Purifiers, the first and most important of which, he contended, were air and water, oxygen being the essential element. He offered the following resolutions, which were adopted:

“Resolved, That it is the first duty of States and municipalities—first in importance and first in the order of time to make a sanitary survey of the water-supply, to preserve it against all unnecessary and avoidable contamination.

“Resolved, That no municipality should introduce a water-system without at the same time providing a corresponding and extensive sewer-system.”

Dr. A. Garcelon, of Maine, then read a paper on Surgery, which was referred to the Committee on Publication.

Dr. Edward Seguin made the following report, with a resolution attached, which was adopted, in the name of a previous committee:

“Since several years, the American Medical Association has given its support to a measure of great interest for those who have at heart the advance of physic, namely:

“The establishment of uniform means of observation, and of medical records, for the physicians of all countries.

“This action of the American Medical Association has been expressed by the adoption of successive resolutions, and by the sending of delegates charged with the mission of advocating this reform:

“In 1873, to the British Medical Association, meeting in London; and to the French Association for the Advancement of the Sciences, meeting at Lyons.

“In 1874, to the British Medical Association, meeting at Norwich; and to the French Association for the Advancement of the Sciences, meeting at Lille.

“In 1875, to the International Medical Congress, meeting at Brussels.

“In 1876 next (September), the same Congress will meet in this very place; and now the American Medical Association is called to decide what position it will assume in this matter.

“Will it recede from its former position, and leave the task to second-hand promoters, or will it continue its initiative before the International Council?

"This is not only a question of pride for the Association, it is also one of justice due to the American physicians at large. If the constitution and by-laws of this Association prescribe an annual transfer of its meetings from one part to another of this vast country, it is to give us opportunities to study and express the wants of the whole profession. Of these wants, none has been found to be more deeply felt than the desire of partaking, as givers and receivers, in the discoveries of our art. But this want is not ours alone; it is universal; and if it succeed, the American Medical Association will deserve the thanks of all for having planned, and carried into execution, the most important instrument of internationalization of medical progress.

Therefore the Association should resolve to charge its delegates of former years to continue to advocate the uniformity of means of observation before the various medical societies, and particularly at the next International Medical Congress, and to report next year what success they may have met."

Drs. Seguin and Bowditch were appointed additional delegates to the International Congress.

A letter was read which had been received from the Medical Society of Victoria, asking for a list of the medical colleges of the United States recognized by the American Medical Association. This gave rise to a very active debate, attended with the wildest confusion, the President being completely unable to control the Association, and at times seemingly being forgetful of all parliamentary rules. Dr. Toner, of Washington, offered a resolution to lay the subject on the table,—which was carried unanimously.

On the next day, Thursday, June 8, after the reading of an excellent paper on Obstetrics, by Dr. S. C. Busey, of Washington, D. C., the roll was read and confirmed, various trifling exceptions being taken to certain names. On the reading of the name of Sarah Hackett Stevens, representing the Illinois State Society, Dr. Brodie, of Detroit, moved that that and all such names be referred to the Judicial Council. A motion that this resolution be laid upon the table was carried by a large vote, amidst considerable applause; and Sarah H. Stevens was therefore received as a delegate.

Dr. Henry A. Martin, of Boston, offered a resolution that the subject of bovine or animal vaccination is an important one as compared with the usual arm-to-arm practice, and that a committee be appointed to report upon the subject at the next meeting of the Association.

On Friday, June 9, the fourth and last day of the meeting, Dr. Toner, of Washington, offered the following resolution, which was unanimously adopted:

"*Resolved*, That members of the medical profession who in any way aid or abet the graduation of medical students in irregular or exclusive systems of medicine are deemed thereby to violate the spirit of the ethics of the American Medical Association."

Dr. H. C. Wood, of Philadelphia, offered the following, which was adopted:

"Resolved, That a committee of three be appointed by the Chair, to obtain from Congress an appropriation for the publication of the Subject Catalogue of the National Library, and that the State societies are requested to take such action as may be deemed fit to further said object."

The Committee on Nominations presented their report, which was adopted.

For President.—Dr. Henry J. Bowditch, of Massachusetts.

Vice-Presidents.—Dr. N. J. Pittman, of North Carolina; Dr. Franklin Staples, of Minnesota; Dr. Joseph R. Smith, of United States Army; Dr. Samuel C. Busey, of Washington, D. C.

Treasurer.—Dr. Casper Wistar, of Pennsylvania.

Librarian.—Dr. William Lee, of the District of Columbia.

Committee on Library.—Dr. Johnson Eliot, of the District of Columbia.

Assistant Secretary.—Dr. J. H. Hollister, of Illinois.

Committee of Arrangements.—Drs. N. S. Davis, J. W. Freer, H. A. Johnson, T. D. Fitch, H. Jones, Joseph P. Ross, and Leslie Curtis.

Committee of Publication.—Dr. W. B. Atkinson, Chairman; Drs. T. M. Drysdale, Albert Fricke, Samuel D. Gross, Casper Wistar, Richard J. Duglison, all of Pennsylvania, and Dr. Milham, of the District of Columbia.

Medical Council.—Drs. N. S. Davis, of Illinois; E. L. Howard, of Maryland; W. O. Baldwin, of Alabama; H. W. Bean, of New York; A. N. Talby, of South Carolina; J. R. Logan, of Georgia; D. W. Stormont, of Kansas. This council is to take the place of the seven whose terms expire at this meeting. The rest of the present council is continued.

The time and place of the next meeting were fixed for the first Tuesday in June, 1877, at Chicago, Ill.

Dr. Bell, of Iowa, offered the following resolution, which was adopted:

"Resolved, That there be appointed a committee of three persons, members of this Association, in each of those States where there has been no action taken for the establishment of boards of health, to urge upon those States the necessity of the establishment of such boards."

The hour for adjournment having arrived, the newly-elected President, Dr. Bowditch, was conducted to the platform, when Dr. J. Marion Sims, the retiring President, read his farewell address. He said, "The moment draws near when we must say farewell. The events of this session will soon become history. In after-years we shall doubtless note changes in our organic laws that may be traced back to this meeting."

In closing, the doctor, in speaking of the Southern delegation,

said, "With returning prosperity, our Southern brethern will be found working together shoulder to shoulder with us. Where once there was bitterness and hate, there is now peace and love. We have risen above all sectional feelings, which is as it should be; and now, in this Centennial year, Massachusetts and South Carolina can join hands in this peaceful hall of science." The doctor here turned to the newly-elected President and clasped his hand,—which action was vociferously applauded. The speaker then introduced the new President to the Convention, saying,—

"May the blessing of heaven rest upon his head, on our whole country, and upon every member of this Association."

Dr. Bowditch then, in a brief address, returned thanks to the Convention for the honor conferred upon him, hoping that the pleasant relations now existing would continue.

Dr. E. R. Squibb offered the following preamble and resolution:

Whereas, The usual time for a decennial revision of the United States Pharmacopœa is drawing near; and

Whereas, The plan of revision and publication in force in 1870 may not now be the best that could be devised; therefore,

Resolved, That the American Medical Association take the whole subject of the National Pharmacopœa into consideration, for a review of its management; and, for the present time, with especial reference to the following questions:

"First, Whether the present plan of decennial revision and publication be practically sufficient for the needs of the *Materia Medica* and Pharmacy of the present time; and, if not sufficient, whether a plan could be devised which might offer probable advantages enough to justify an attempt to disturb the present one.

"Second, Whether this Association be the proper custodian in this country of the interests involved in the National Pharmacopœia; and, if it be the proper source of the National Codex, whom can it invite to co-operate with it in the work?

"Third, If it be a work for this Association, in what way can its details be wisely undertaken with any prospect of material improvement upon the present plan?

Resolved, That in order to facilitate mature and general deliberation upon so important a subject, the final discussion of these resolutions be laid over for at least one year, and that the matter be recommended to the President of the Association for consideration in his annual address to the meeting of 1877."

The resolutions were adopted as read, and the Convention adjourned *sine die*.—*Philadelphia Med. Times*.

Editorial.

The American Medical Association.

In another part of this number we publish a synopsis of the proceedings of the American Medical Association, at its meeting in Philadelphia, for which we are indebted to the *Philadelphia Medical Times*.

Nothing of any special interest or importance, transpired at this meeting beyond the usual routine of business.

The address of the retiring President, Dr. Sims, of New York, was a disappointment and surprise to a large number of the delegates present. While we do not profess to look upon the Code of Ethics as perfect, we should be sorry indeed, to see it abolished. It is violated frequently and in other ways than by the proscribing of McMunn's Elixir, Chlorodyne, and other secret remedies. Yet we think that it is a wholesome check to a number of the profession who are not actuated by that "unwritten law" which rules the action of every honorable physician. Dr. Sims tells us that it is violated by not only the rank and file, but by those high in the profession, which strikes us as an argument for increased stringency, rather than abrogation. The matter of a medical man taking out patents upon instruments and appliances which he has originated, is one which has many and strong arguments on both sides; Dr. Sims seems to favor the patenting of all such inventions.

We hope that a full report of the President's remarks will change in some manner their general tone in reference to the Code of Ethics; as they now stand they are unworthy of being pronounced by the head of the American Medical Association, and will receive the sanction of those only who are in favor of fellowship with quacks and impostors and a general "devil take the hindmost" system of practice.

The other topic to which Dr. Sims gave his attention was Syphilis. He does not favor the license and inspection of prostitution as employed in some of the European cities, but proposes to stamp out syphilis by placing its control in the hands of Boards of Health, giving them the same arbitrary power in reference to it as they now have in small-pox and cholera. He would have all immigrants thoroughly examined, and those found tainted should not be allowed to remain in the country. Why limit this proscription to immigrants? If Dr. Sims wishes to keep syphilis out of the country he must also banish those affected with it, who are already here, which scheme would result in a most frightful depopulation of the country. Dr. Sims did well in calling attention to the question, which all admit to be one of great importance, but

we fear his plan of meeting the issue is one which will not be found in any measure practicable.

Since writing the above remarks the following from the *Medical Record* has come to hand, which we copy in full :

"THE USE OF PROPRIETARY MEDICINES."

"Considering the great opportunity afforded the late President of the American Medical Association for saying a good word for the profession, we are the more surprised at the manner in which he treated the subject of proprietary medicines in his recent address. No one doubts that physicians have long been prescribing patented medicinal preparations, but such a reprehensible practice cannot be viewed as an argument to prove that part of the Code of Ethics which forbids it should be modified or abolished. The fault of wrong-doing rests not with the law which is intended to prevent it, but with the individual transgressing. As the case now stands, the profession has been humiliated before the world by the virtual admission that not unfrequently it is compelled to call in the aid of quackery to cure disease. If this be a fact, how can we reconcile our pretentious advocacy of the claims of scientific medicine? The use of secret remedies is such a disgraceful reflection upon the resources of our art, that the best we can say for it is that the more the practice is hidden in the humiliation of our own incompetency the better for the profession at large. But what have we to say of the wide-spread publication of an opinion from a leader in the profession, and a president of the representative Medical Association of America, that quack remedies are so useful in the treatment of disease that we cannot do without them, and that in view of making principle consistent with practice, we should alter our Code?

"We cannot believe that the profession will hold itself responsible for this error of judgment on the part of the President of the Association. In the name of that profession we cannot too strongly condemn the principle upon which the argument is founded, and cannot too radically express our mortification of the mistaken policy which gave it such untimely utterance.

"As a question of principle we must take a firm stand against every innovation of quackery, notwithstanding it may be backed by the very priests at our altars. The provisions of the Code in regard to the use of patent nostrums are explicit enough to suit the good intentions of every practitioner, high or low; and as far as the principles are concerned are beyond criticism. If science cannot compete with quackery, humbug, and ignorant empiricism in finding remedies for disease, it is time we enlarged our laboratories, improved our methods of analysis, and studied our materia medicas. What kind of a spectacle do we present to the world in regard to the use of proprietary medicines? We claim, as leaders in professional thought, to be masters of the science of medicine; as well qualified practitioners, to be capable of making every possible application of the resources of that science for the good of our patients; and yet we acknowledge that the veriest quack can blindly stumble upon a remedy which we are glad to use, although ignorant of its composition. We cannot believe that the profession is willing to stultify itself before the public by any such admission. In that view we wish to see the Code stand where it is. The principle upon which it is founded cannot be improved, and we should jealously guard any infringement of its provisions, not only by the ordinary practitioner, but by the President of the Association himself.

"It is our duty and privilege to use anything and everything in the shape of medication which may be of service to our patients. We should fulfil these conditions without recourse to proprietary medicines. Even granting that some quack may throw a valuable remedy in our way, we have the facilities for ascertaining its quality and composition; but failing to do so, we

should not, as scientific men, use it at all; in other words, we have no right to prescribe any remedy the composition of which we are ignorant.

"It is often said by physicians in regard to proprietary medicines: 'I know that this compound is a good one, and I use it.' That is well enough as far as it goes, but unless the prescriber takes pains to ascertain upon what the good effects of such a remedy depend, he ignores all the claims of scientific therapeutics and sinks into the hopeless imbecility of aimless empiricism. While we are willing to admit that this evil of striking at disease in the dark is secretly winked at by many physicians, it is nevertheless radically wrong, and should, far from being excused, be unqualifiedly condemned as a disgraceful method of dodging the sacred obligations which we owe to our patients, and of sacrificing the best interests of legitimate medicine.

"As a rebuke to the sentiments of the President on this question, we notice a coincidence almost providential in its significance, in the rejection of one of the papers read before one of the sections of the Association because its author advocated the claims of a secret remedy. A similar action for a similar reason was taken upon a paper read before the State Medical Society at its recent meeting. This is as it should be, and the unanimous vote of the members is a pretty clear indication of the drift of professional opinion. The proper interpretation of the latter will prove to the President of the Association that the profession would much rather raise the standard of professional moral to the high level of the requirements of the Code, than lower that level to suit the requirements of those who are proper subjects for discipline."

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Meeting of Representatives of American Medical Colleges.

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We publish elsewhere, page 424, a report of the meeting of delegates from American Medical Colleges, held in Philadelphia, June 2d and 3d. We have not been disappointed in the results of this Convention, as we did not expect much to be accomplished. An organization of this kind, where the delegates are not empowered to commit the faculties which they represent, to the decisions of the Association, and whose first action after organization is to pass a resolution distinctly stating that the action of the convention shall not be considered binding unless endorsed by the faculties represented, can not be expected to accomplish much. Aside from expressing the opinion of those present in regard to various matters of educational reform, we do not see how the convention expected to do anything.

The first question discussed and resolved upon is in reference to the beneficiary system and its abuses. We think that aside from one or two schools who have adopted a system of beneficiary scholarships and *advertised for applicants*, there is no one in the profession who is in favor of placing a low estimate upon the value of a medical education. A young man, if thoroughly in earnest, will find means to obtain his education, and prize it the higher when he has won it at the cost of some sacrifice.

Question number two every one will answer in the negative, who does not want to see the medical profession make a retrograde instead of an advance

move. Under the present or under any method of medical teaching, three years is a period sufficiently short for the most ardent seeker after a diploma, and those who propose to shorten the period of study should not receive the recognition of the profession. Of these two questions as well as of questions three, five, six and seven, we can simply say that in the minds of every honest, well-meaning physician they were decided as the convention decided them, long ago, and that an association of delegates of American Medical Colleges should consider it necessary to seriously consider and vote upon them is an imputation upon the honesty of the teachers of medicine in the United States. As the subject of uniform college fees is held over until 1877, we will reserve what we have to say on that subject until later. Near the close of the convention a resolution was introduced saying that no degree should be conferred without examination in person of the candidate. From the tone of this resolution one not familiar with the subject would infer that medical colleges were in the habit of conferring degrees without examination of the candidate. We cannot believe that Jefferson College with which the mover of this resolution is connected, can be guilty of such a thing, and for the honor of the profession and good of humanity, we earnestly hope that that no medical school, under any circumstances, could be induced to confer degrees without examination. The convention may, upon the whole, be called a failure as far as results are concerned. We hope that when it next meets that its work will be of a more practical kind, such, for instance, as the best method of introducing into all medical schools a *thorough, graded*, course of instruction.

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Meeting of the New York State Medical Society.

The annual meeting of the Medical Society of the State of New York, was held in Albany, Tuesday, June 20th, Dr. Rochester, of this city, presiding. We present elsewhere the President's inaugural address, which will be found to be an able and interesting review of the prominent medical questions of the day. The following is the list of officers elected:

President—Dr. E. R. Squibb, of Brooklyn.

Vice-President—Dr. J. V. Kendall, of Baldwinsville.

Secretary—Dr. Edward R. Hun, of Albany.

Treasurer—Dr. Charles H. Porter, of Albany.

Censors—Southern District, E. R. Peaslee, New York; E. H. Parker, Poughkeepsie; Ellsworth Eliot, New York. Eastern District, Henry B. Whiton, Troy; Jas. L. Babcock, Albany; John P. Sharer, Little Falls. Middle District, M. M. Bagg, Utica; Geo. W. Cooke, Otego; C. G. Bacon, Fulton. Western District, C. C. Wyckoff, Buffalo; Harvey Jewett, Canandaigua; Caleb Green, Homer.

Committee on Prize Essay—Henry W. Dean, Wm. S. Ely, Monroe; Julius F. Miner, Erie.

Committee on Publication—E. R. Hun, Chas. H. Porter, Wm. H. Bailey, Albany.

Committee on By-Laws—Wm. C. Wey, Chcmung; E. R. Hun, Wm. H. Bailey, Albany.

Censor of Syracuse University—B. F. Sherman, St. Lawrence.

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Books Reviewed.

A Manual of Pathology. For the use of Students and Practitioners of Medicine. By ERNST WAGNER, Professor of General Pathology and Pathological Anatomy in the University of Leipzig, etc. Translated from the sixth German edition, by JOHN VAN DUYN, A. M., M. D., and E. C. SEGUIN, M. D. New York: Wm. Wood & Co., 1876. Buffalo: H. H. Otis.

The first edition of this work was published in German in 1862, under the title Uhle and Wagner's Manual of General Pathology, the work being edited by Wagner.

Of the present edition, the American editor says: "No book in the English language gives such a thorough *resume* of the elements of medicine."

In the first portion of the work are articles upon the general conception and forms of morbid states, nature and extension of disease, its symptoms, prognosis, duration, course and termination by death and cure, agony, apparent death, and causes of death.

In part second, on general etiology, the authors treat of—1st, internal causes, inheritance, age, sex, constitution, etc. 2d, external causes, as atmospheric influences, soil, climate, dwelling, clothing, food, drink, occupation, parasites, contagions and miasmata. A careful consideration of the article on parasites, which includes fungi bacteria, etc., will place the reader in a position better to understand the numerous theories and writings upon these subjects.

The third and fourth parts comprise the balance of the work. Part Third is upon general pathological anatomy and physiology, and is divided into three sections—1. Local disturbances of the circulation. 2. Inflammation. 3. General disturbances of nutrition. Under the last section are included retrograde metamorphoses—fatty, lardaceous culloid, pigmentary, etc., and progressive metamorphoses—regeneration, hypertrophy and new formations or morbid growths. The portion on morbid growths occupies a large portion of the work, over one hundred pages, and is one of the most interesting sections. The author follows the classification of Virchow.

Part Fourth is a consideration of the Pathology of the Blood, including

anomalies of the size and shape of the blood-corpuscles, anæmia, acute and chronic, including chlorosis and Addison's disease; changes in the amount of hæmia-globuline, of albumen, and of water in the blood; leucocythæmia, pyæmia, diabetes, fever, marasmus, etc.

The amount of labor spent in the preparation of this volume must have been simply enormous. Every chapter is opened with an extended reference to works upon the subjects of which it treats, and throughout the entire text a large number of authorities are referred to. The work is one which will amply repay perusal, in fact, no physician should neglect to read it, and the student should make it one of his most cherished text-books.

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Books and Pamphlets Received.

The Medical and Surgical History of the War of the Rebellion. Part II, Vol. II. Surgical History. Prepared under the direction of Joseph K. Barnes, Surgeon General U. S. Army, Washington: Government Printing Office, 1876.

Statistics, Medical and Anthropological, of the Provost-Marshal General's Bureau. Derived from the Records of the examination for Military Service in the armies of the United States, during the late War of the Rebellion, of over a million recruits, drafted men, substitutes and enrolled men. Compiled under direction of the Secretary of War, by J. H. Baxter, A. M., M. D., Col. and Chief Medical Purveyor, U. S. Army. In two volumes. Washington: Government Printing Office.

Micro-Photographs in Histology, Normal and Pathological. By Carl Seiler, M. D., in conjunction with J. Gibbons Hunt, M. D., and Joseph G. Richardson, M. D. Vol. I, Nos. 1 and 2. Philadelphia: J. H. Coates & Co.

Spiritualism and Allied Causes and Conditions of Nervous Derangement. By William A. Hammond, M. D. Illustrated. New York: G. P. Putnam's Sons, 1876. Buffalo: Peter Paul & Bro.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. Von Ziemssen. Vol. XI, Diseases of the Peripheral Cerebro-Spinal Nerves. By Professor Wilhelm Heinrich Erb, translated by Henry Power, of London, England. A. H. Buck, M. D., American Editor. New York: Wm. Wood & Co., 1876.

Memoires sur la Galvano Caustique Thermique. Par Le Docteur A. Amussat, Filés Avec 44 Figures intercalles dans le Texte. Paris: Librairie de Germer Bailliére, 1876.

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ART. I.—*The Surgical Treatment of Dysmenorrhœa*.* By O. H. E. CLARKE, M. D., Cohoes, N. Y.

In presenting this subject it is necessary to consider the following enquiries:

1st. Is Dysmenorrhœa a Surgical Disease, and amenable to Surgical Treatment?

2d. Which are the cases in which benefit may be expected from treatment?

3d. What Surgical means is the most available, and promises the most certain results?

Many, but a few years ago, would, in undertaking to treat a case of Dysmenorrhœa, commence with feelings of misgiving, and would remark to the patient that she must have patience, that many suffered as she did, that if she were married it would benefit her, &c. The unfortunate patient would no doubt be willing to marry could that be reasonably accomplished, but circumstances often forbade even that doubtful remedy. The disconsolate maiden with no prospect of relief often gave herself up to melancholy, or to gin and opium.

* Read before the Medical Society of the County of Albany, N. Y., March 5th, 1876.

Many, no doubt, like myself, have passed this period of transition, and now meet these cases with courage and confidence.

What has caused this change? for myself I can say, the conviction that Dysmenorrhœa depends generally on some mechanical obstruction to the flow of the menstrual fluid, that cases are due to other causes I do not doubt, but the proportion yet remains unsettled, but as our means of diagnosis become more perfect the number of cases dwindle; which cannot be explained.

Dr. J. Marion Sims, in his uterine surgery, gives a list of 129 cases, which he divides into 100 cases of painful and 29 cases of excessively painful menstruation. In the first category the os uteri was normal, but in six cases in the second none were found normal, while contraction or flexion were present in more than 90 per cent. of all the cases.

So convinced is this author of the mechanical causation of this malady, that he lays it down as an axiom, that there can be no Dysmenorrhœa if the canal of the neck of the womb be straight and large enough to permit the free passage of the menstrual blood.

Dr. Graily Hewitt in the last edition of his work, says: "Starting with no preconceived theory on the subject of uterine pathology, it has been my object since I have been sufficiently informed and experienced in various methods of investigation, to endeavor to associate the sufferings of the patient with the normal condition giving rise to it.

The conclusion has forced itself on me that the changes in shape and position of the uterus, but especially in the shape of the organ are almost responsible in one way or another for the suffering of the patients, who are the subjects of them, and further the conclusion, no less inevitable, that the restoration of the proper shape of the uterus is the means of removing these sufferings."

I hold it as unquestionable, continues Hewitt, that Dysmenorrhœa is to be regarded as a symptom indicating in almost every instance an impediment to the escape of menstrual fluid from the uterus.

In support of his position he gives statistics of his large exper-

ience at the University College Hospital, London. Out of 624 cases of severe uterine disease which were carefully examined, 377 were found to be due to material change in the shape and position of the uterus, there being 296 cases of flexion and 81 of prolapsus.

All of Hewitt's cases of Dysmenorrhœa excepting seven (most of which were imperfectly examined,) were referred to flexions or prolapsus.

These authors represent what has been called a bias in Gynecological Science, and the facts from which their deductions are drawn, as well as those conclusions themselves, have been considered by high authorities as based on a misconception of the true anatomy and physiology of the uterus.

The real starting point in uterine pathology according to Graily Hewitt, is flexion—a change of shape of the uterus, whereby partial strangulation of its tissues is produced, resulting in chronic congestion of the body and fundus of that organ. Among the consequences of that condition, is an increase of secretion from the lining membrane of the uterus. This being pent up by the flexion, it produces in conjunction with the other effects of chronic congestion, that train of symptoms which have been regarded diagnostic of Endo-Metritis.

The opposite school, following the original views of Dr. Henry Bennett, believe inflammation of the lining membrane of the cervix to be *the* great uterine disease, while Scanzoni has shown that the whole of the uterus must be included in most cases.

A striking example of the manner in which the *same* fact will be variously interpreted by different minds is afforded by the results of treatment in these cases. While the disciples of Bennett and Scanzoni believe that the application of caustics &c., to the uterine mucous membrane acts beneficially by curing the inflammation present, Hewitt holds that it is the dilatation and consequent straightening of that organ which necessarily accompanies such treatment, to which most if not all the benefit obtained must be attributed. The whole of this is denied emphatically by Dr. Henry Bennett, in answer to a paper on the subject by Dr. Matthews Duncan, alike as to its anatomy, physiology and path-

ology, and he holds up to ridicule the whole as "*imperfect surgical notions*," which are often substituted for what he calls "*rational treatment*," while Dr. Wm. Cummings of Edinburgh, borrowing the very thunder of his opponents, declares that when the bilateral operation is performed, it is the *hemorrhage alone* that does good, and he proposes to substitute scarifications for all such proceedings. I believe this writer uses a very appropriate phrase when he says he *assumes* that stricture is very rare, and exaggerates somewhat when he characterizes the treatment of those who believe in the theory of obstruction as "heroic modes, the details of which are sufficient to make one's hair stand on end!

In a lecture delivered in the Bellevue Hospital Medical College, and published in the *New York Medical Record*, in January of this year, Dr. E. R. Peaslee, after reviewing the various theories that have successively reigned in Uterine Pathology since 1835, terminates by maintaining that it is the oversight of congestion as the starting point of most uterine disease and its being mistaken for inflammation that has led to so much confusion.

Thus do opinions in our profession, as in all human affairs, tend to extremes, but the very enthusiasm with which each inquirer investigates in the interest of his own theory, increases the amount of general information, and promotes the final cause of scientific truth.

Avoiding the discussion of these views as beyond the scope of this paper, and confining ourselves to dysmenorrhœa, let me venture to support the opinion that as far as this disease is concerned we should adopt the views of Graily Hewitt, Marion Sims, Savage, Greenhalgh, and their followers, that this complaint in a vast majority of cases is due to some mechanical obstruction to the flow of the menstrual fluid; and since my attention has been called to the investigation of such cases, I further believe, as does Hewitt, though perhaps not to the same extent as that author, that in most cases, *flexion of the uterus* will be found at the root of the evil, and that its remedy will relieve the disease.

Dr. Matthews Duncan, who is in direct opposition to Dr. Henry Bennett, with respect to the normal condition of patency of the internal and external os uteri, nevertheless does *not* believe that

contraction is the true cause of dysmenorrhœa, but attributes the majority of cases to what might be termed *idiopathic spasm*. Yet Dr. Duncan has found that dilatation with sounds until a No. 16 can be passed, is the best means of affording relief. Four years ago Sim's Uterine Surgery caused me to take a special interest in these complaints, and since that time, I have kept short notes of every case of confirmed dysmenorrhœa I have treated. I find them to be fifty-eight in number, and will give a table of the diagnoses which formed the basis of treatment.

In the fifty-eight cases there were found,

Anteflexion of the uterus, (sometimes combined with version,)	in 20
Antero-lateral-flexion, (in one of which there was version,)	in 3
Retroflexion (sometimes combined with version,)	in 12
Small cervix uteri with narrow cervical canal,	in 12
Enlarged or engorged cervix, apparently from inflammation—no flexion being present,	in 4
Polypus,	in 3
Tortuous cervical canal, or curved cervix,	in 2
Cases referred to Neuralgia, (in which there was no discoverable cause,)	in 2
Total,	58

The results of treatment in these fifty-eight cases were as follows:

All received some benefit, and forty-seven were much pleased with the great change for the better that followed.

Of the eleven who were but little benefitted, not one persevered two months in the treatment, and have been lost sight of. Of the forty-seven who were much benefitted, twenty-one were relieved so permanently and effectually that they considered themselves cured. Sixteen ceased attendance as soon as considerably relieved, and have not been heard from since, while three are yet under treatment. The seven remaining although better than before treatment cannot be called cured—but as almost all these work every day, and had to do so while the treatment was being pursued, this circumstance must be received in attenuation of the

number that did not obtain lasting relief. I have excluded altogether from this list those who after a few visits ceased all treatment.

I believe that these results, under the circumstances, justify the assumption that the diagnosis was in most cases accurate, and shall therefore maintain the opinion, that by far the most important, because the most frequent cause of dysmenorrhœa is flexion of the uterus, and that next in frequency is tenuity of the canal of the cervix uteri.

Assuming that you have granted the question, I trust you will excuse a rapid glance at some of the causes and effects of flexion of the uterus.

The womb has for its special object the propagation of the species, and in order to do so, it must expand to an enormous extent, to form a temporary home, for the frail creature which is one day to become a man or woman. Were it attached to surrounding tissues, in all its parts, this would be impossible; and we accordingly see, that although it is firmly united with the bladder and rectum, in its cervical portion, the body of the uterus is comparatively free. It is true, we have the broad ligaments attached to the sides of the uterine and parietes of the pelvis, which, to a certain extent, restrain its motion laterally, and the round ligaments, which prevent its falling backwards, in a much more imperfect manner; but there is no special provision against ante-flexion, unless it be the presence of the bladder, which of course is not always full.

What then, it may be asked, generally keeps the uterus upright? the answer is, the *thickness* and *resistance* of its own walls.

Many physicians figure the uterus to their own minds as being a hollow viscus. This is a great mistake; they should always think of it as a *solid body*, having in its center an extremely small cavity, the walls of which are almost in contact. This solid fleshy body is firmly held in its place below by the vesico-uterine and recto-uterine ligaments, connective tissue and blood-vessels, and holds itself upright, in the normal state, mainly by *its own* stiffness and solidity.

We will now imagine the case of one of our mill-hands, so frequent in Cohoes.

Our patient has to work many hours in the day, in a position bent forward, running a sewing-machine or pursuing some similar employment. Her labor and confinement are almost constant, her living possibly not of the best, and she becomes anemic and sickly, which cause her tissues to become less well nourished,—more soft and yielding. But her labor continues, and her constrained position for many hours a day is still the same. As a consequence, the uterus, which, as we have seen, is attached below but free above, become gradually doubled on itself in an ante-flexed position. This ante flexion, constricting the vessels of the uterus which almost wholly pass along the upper part of the cervix, causes a certain amount of strangulation of the uterine tissues, with chronic congestion of the fundus and body and its results.

Among these consequences, one of the most frequent and remarkable is dysmenorrhœa.

The flexed, and therefore constricted cervix, offers a smaller channel than before to the exit of the menstrual fluid, while the chronic congestion in which the organ is maintained, is likely to increase its amount. Both these circumstances combined, the lessened channel of exit, and increased material to pass through it, causes *dilatation* of the cavity of the uterus, which now retains a certain amount of blood; this, in its turn, provokes forcible action of the uterine walls, to expel the contents, which continuing, brings on *hypertrophy of the uterus* with still more *congestion, dilatation* and *flexure*. Thus when once a certain point is reached, matters go from bad to worse if not relieved. The pleasures and exertion, combined with the irregular and imprudent diet, incident to a career in which personal enjoyment is the great aim of life, place our wealthy ladies in as much danger of contracting these maladies, as their humble and less fortunate sisters.

I have chosen but one cause of flexion as an example, leaving to your own well informed sagacity, to suggest the others, but I cannot refrain mentioning imprudences at an early date after parturition,—when the uterus is soft and large—as a common start-

ing point for these ailments; nor can I fail to indicate sterility and abortion, as among their frequent consequences.

In support of the fact that flexion *alone*—without narrowing of the cervical canal, properly so-called, or inflammation, is a cause of dysmenorrhœa. I will cite a few out of several cases.

Miss K——, aged 27, called on me last month to consult about a pain in the right side, which was almost constant, and increased by exertion. This pain had been present for two or three years, and for about the last year her monthly periods were accompanied with much distress, which became more and more severe. The patient works and oversees in a knitting mill, and is either on her feet or sitting down and bent forward during her working hours.

On examining I found the uterus to be very much anteflexed. Her monthly period being about to occur, I explained that I would make no examination with the sound, nor commence treatment, until after she had menstruated, except by placing a proper pessary, to support the uterus in a better position. She returned after her period was over, and said she had not menstruated with so much ease for a long time, and that the pain in her side was very much relieved. I now passed a No. 10 male sound, with great ease, by pushing the fundus backwards with the hand on the abdomen. It entered fully two and a half inches,—the patient is a tall, well developed young woman.

Now, in this case it is evident that there was no real *narrowness* of the cervical canal, properly so-called, but only induced *narrowing* from flexion—neither was there any inflammation, the uterus bearing manipulation with little pain, finally the relief attending the adjustment of a proper support showed both the nature of the case and the treatment indicated.

The following case which applied since completing the list I read, shows the same with respect to retroversion.

Miss E. R., sent for me about six months ago for an ischio-rectal abscess which I opened. She then told me she was subject to much straining, burning and itching about the anus, which prevented her sleeping at night, and she was very costive. Prescribed a saline purgative and anodyne lotion, which gave some relief. Told her she had probably retroversion, and proposed an exami-

nation which was declined. A few days ago she came to the office with same complaint. Says she also has frequent desire to micturate, which causes pain. Agreed to an examination, when I found the uterus completely retroflexed and retroverted and lying fairly across and low down in the pelvis. By giving it the proper curve, I could readily pass a No. 8 sound three inches backwards into the uterus, showing that organ was enlarged, but that there existed no real stricture of the tube, and as the uterus was unusually tolerant of interference, it proved no inflammation was present. Yet this patient besides the symptoms already given, is so sick when menstruating as to be obliged to leave her work and go to bed, and her agony of severe remittent pains continues increasing until on the third day she vomits forcibly and thereby expels a certain amount of clotted blood, after which she begins to get better.

I replaced the uterus and applied a pessary—gave no medicine. Patient called the next evening to say she had not passed so agreeable a day and night for years, and that the burning and itching about the anus had hardly troubled her since.

Miss A. E., 20 years of age, had long been the victim of dysmenorrhœa, pain between her monthly periods, in the hypogastric region, and leucorrhœa; with general debility and anemia.

I found that the uterus was much anteflexed, but that by giving a flexible sound a curve forward, the usual size could be readily introduced. I purposely did nothing but elevate the anteflexed fundus and support it.

Although my patient was pale, thin and had frequent palpitations, was costive, full of pains, nervous, and unable to walk with ease, I avoided giving tonics, purgatives, anodynes, or nervines, by way of experiment. I *elevated* or *straightened* the uterus with a sound, using but the ordinary size, and applied a proper pessary, (one of Thomas') and made the patient wear it *right through the menstrual period*, which has occurred nine times since. The treatment extended over three months.

The patient had not for years been as free from pain as during the first period after treatment began, and each subsequent month was better than the last. The almost constant pain above the

os pubis disappeared by degrees—she recovered appetite, strength, plumpness, and her rosy cheeks, and finally married in August last. I have within a few weeks received the pleasant intelligence, that, at some future day, I shall have to attend her for an obstetric case.

Finally I have notes of five cases of ante flexion in which the patients not being able to afford time or money to go through a regular course of treatment, I simply applied a pessary. Some of these have retained them for three or four months at a time, and have then come to assure me they were much benefitted.

Let us now state briefly the causes which may bring about constriction of the cervical canal and thereby cause dysmenorrhœa.

Foremost in the list is *flexion*, occurring at any part of the uterine canal, but most frequently at the *internal os uteri*—it may or may not be accompanied by version.

Ante flexion is more frequent than retro flexion, especially in the unmarried, it is much more likely to remain undiscovered. Ante flexion appears to be very prevalent in manufacturing cities, if Cohoes can be taken as an example.

Congenital narrowness of the os uteri *internum* or *externum*, or of the whole cervical canal—the latter condition being often associated with the presence of an infantile uterus.

Congestion of the Cervix.—When the cervical canal would be large enough under ordinary circumstances, it may become too small for the function it has to perform, in consequence of undue congestion, and hypertrophy of its lining membrane; or too increased flow of the blood from the cavity of the uterus.

Chronic Congestion of the uterus itself, generally associated with some amount of flexion.

There remain as causes, *Fibroids*, which compress or distort the cervical canal,—*small intra-uterine polypi* hanging down within the cervical canal and acting as a plug,—*Elongated* and often *flexed* cervix uteri, and *Contortion* of the cervical canal, due to irregular hypertrophy of the neck of the womb.

SELECTION OF CASES.

We now come to our second question, or the selection of those

cases in which we may expect benefit from mechanical methods of treatment. Leaving out those purely due to congestion of the uterine vessels, without change of shape, and which would probably be best treated by local depletion, we may expect benefit from mechanical modes of treatment, *in all cases* in which we can clearly diagnose either *flexion* or *contraction* of the uterine canal or *some impediment* to the egress of blood through it from a *polypus*, *fibroid* or some other adventitious growth, or any of the causes of *obstruction* before mentioned.

If we admit as a *fact* that the greater number of cases of ordinary dysmenorrhœa are due to *flexion* of the uterus, it follows that the correction of this flexion will relieve the majority of cases, and such I believe to be the truth. It must not be inferred from this, that I advocate carelessness of diagnosis.

I would not have every patient put on the bed of Procrustes, so to speak, and subjected without discrimination to dilatation and the use of the pessary—far from it! There are, no doubt, absolutely speaking, many cases of dysmenorrhœa altogether independent of flexion, and in which the treatment suited to that condition would be ridiculously inappropriate, if not positively hurtful—but it would lengthen this paper beyond all reasonable bounds to enter into their diagnosis. In every case we undertake to treat, we should make an exhaustive diagnosis—an object not generally to be obtained at one sitting, but as the result of repeated examinations. Besides the general acumen and delicacy of the “*tactus erulites*,” the finger has to learn, so to speak, how to feel in any peculiar case, and it then often resolves problems that seemed hopelessly obscured at first. Moreover, the diagnosis being satisfactory before commencing treatment the surgeon should conscientiously weigh, in his own mind, whether the case is urgent enough to counterbalance the often serious objection to local treatment—especially in the virgin. While deprecating, as unjustifiable, the employment of local means when not imperatively called for, I yet believe that when dysmenorrhœa is a cause of continued impaired health, or of great pain, when it makes life cheerless, and without enjoyment, or causes the duties that devolve on the patient to become impossible, without the endurance of

much suffering, *it then* is not only *justifiable* but *laudable* in the surgeon to interfere for the relief of the patient, even if she be a virgin. I do not hold that a maiden is *bound* to wait until the bloom has left her cheek, and the fire has departed from her eye, till she has become spiritless, and without hope in the future, and *then and then only* submit to treatment, which if employed months or years before, would have saved her to health and happiness.

Apart from the certain diagnosis to be arrived at by the patient examination, two subjective symptoms are of much importance, as pointing, *the one* to *obstruction* to the free passage of the menstrual fluid, *the other* to *anteflexion* of the uterus.

The first of these symptoms is intermittent pain at the menstrual period, and the second, pain in the inguinal region, generally confined to one side.

Had we these two symptoms in a given case, we would expect to find anteflexion tending to one side—that on which the pain was felt; and were we to find from bi-manual examination that such was the case, we would conclude that this anteflexion *obstructs* the free exit of the menstrual blood, *even* if we could pass a No. 8 catheter into the uterus without difficulty. Dr. Bennet and his school would hold that there cannot be any obstruction in such a case, but it appears possible, that having their minds fixed on the size of the tube, they have not considered sufficiently, that this tube may be bent on itself, thus offering resistance to the flow of menstrual fluid, yet yielding without the exertion of much force before a solid sound.

TREATMENT.

With respect to the treatment of dysmenorrhœa it is not my intention to inflict on your patient ears, a description of the multifarious pessaries that have been invented, nor even to give my views on the relative merits of the different operative measures that have been employed, either to replace the uterus in its proper position, to dilate the cervix, or to extirpate foreign growths, such a work, on my part, would be one of supererogation, when addressing this learned assembly, many members of which are my seniors, and have, undoubtedly, more information and experience on the subject than myself. I shall, therefore, briefly state some of the

modes of treatment I have used, and bring to your notice an operation for the relief of dysmenorrhœa, which is, as far as I know, comparatively new and unpracticed, and which may, therefore, be of interest to the society. I refer to the forcible and rapid dilatation of the cervix uteri, as proposed by Dr. John Ball, of Brooklyn.

The ordinary cases of dysmenorrhœa, and of other pains referable to the uterus, as they occur in office practice in Cohoes, are generally due to *anteflexion*, with or without narrowness of the cervical canal. These conditions are occasionally accompanied by a congested and tender state of the cervix and os uteri.

Two years ago, I used to commence the treatment of such cases by local depletion, practised by passing a narrow, sharp knife as far as the os internum, and incising down to the external os, to the depth of from one-eighth to one-quarter of an inch. The patient was put to bed, and a hot poultice applied over the vulva. Considerable depletion was thus obtained, the patient was kept in bed three days, and in one week afterwards I commenced dilatation by means of graduated sounds, and made the patient wear a pessary.

Latterly I have very seldom used the depletion, and find that the congested and irritable condition of the os and cervix disappears as the treatment by sound and pessary progresses.

Could you, in all cases, procure rest for your patient, it would be a great advantage, but practically this condition, if insisted on, interferes so much with your patients occupations or pleasures, that it deters her from profiting by the advantages of treatment, at least for some time, that is, until she becomes worse. Happily in cases of ordinary severity, and not very long standing, much relief is obtained, even when the patient continues her usual avocations.

The means I have used for both *dilatation* and *replacement* of the flexed uterus, are a series of metallic sounds of different sizes and degrees of curvatures. The patient comes to the office twice a week, and I introduce the sound, leaving it in the uterus about ten minutes. I generally use two sizes at every sitting, at first, one that can be passed without difficulty, and immediately on its removal the next size larger. If the uterus is flexed, as is gener-

ally the ease, it is turned into the opposite position, by rotating the sound, and holding it thus, for ten or fifteen minutes. Then a proper pessary is put into the vagina, and retained continually. The pessary used is an ordinary *ring pessary* moulded into an *ovoid* shape for eases of *retroversion*, and into what Dr. Graily Hewitt calls "*cradle*," for eases of *anteversion*. For the latter the pessary of Dr. Thomas, likewise answers very well. All pessaries that have a stem and support outside the vagina displease most patients, who, unless the symptoms are very severe, are sure to discontinue their use. Nor are such disagreeable expedients necessary for all ordinary eases of dysmenorrhœa that are not of very long duration.

The *block tin rings* that can be found at Martin's in this city, are extremely convenient, and in a few moments can be bent into any shape one desires. I have never known them to cause irritation.

By means of this treatment, combined with tonics and purgatives, if indicated, *most* of the eases progress to the satisfaction both of physician and patient, and in three or four months are permanently relieved, at least to a great extent.

An anodyne containing Hyoseyamus, Indian Hemp and Chloric Ether, is generally proper for the first period or two after commencing treatment, and then generally becomes unnecessary.

If there is *lateral version*, one arm or side of the cradle pessary is made to project upwards and supports the uterus in its proper position. If there is *narrowness* of the cervical canal, special attention is paid to using graduated sounds until a No. 12 can be passed with ease.

In *strong* contrast, as the foregoing statements may appear, to those of many of the most eminent gynecologists, I, nevertheless, make them with confidence, based as they are on actual observation, and supported by the corroborative testimony of names as eminent as any in the profession, which give me encouragement in stating my own short experience. It is possible, that the *apparently irreconcilable* discrepancy in the opinions of these men of equal opportunities and acquirements, may be *explained* by supposing that *one class* includes only *intractable cases*, and the

other *all cases* of dysmenorrhœa. In estimating the value of treatment, it is *no more* fair to base one's deductions only on cases that have resisted all treatment and have continued for a very long time in this disease, than in any chronic ailment. What would be thought of judging of the efficacy of a mode of treatment for Chronic Bronchitis or Rheumatism, if tested by those cases *only* which had proved themselves *inveterate*, and had resisted all other modes of medication. Would it not at once be said that to give the method a fair opportunity of manifesting its *comparative* value, it should be employed under the *same* circumstances as the treatment with which it is compared, and would not the opinion unavoidably force itself on an impartial mind that had these intractable cases been treated earlier, they might never have assumed their present unpromising character.

Whether the improvement is due to a correction of the flexion, or to distention of the canal of the cervix, (which partly or wholly obviates the effects of the flexion,) is not certain. I believe that in the majority of the cases it is a combination of both these effects, that brings about the good results which follow this plan of treatment. In this connection an important distinction has to be made between *version* and *flexion*. The *version* is, in all probability, very rarely cured, but the *flexion* being relieved, the obstruction to the flow of blood is removed. In other words, although the uterus is not reinstated in its normal position, the canal of the cervix is rendered straight in itself. It is *in my* opinion, the delay that occurs before attempting local mechanical treatment, which, (in many cases,) is the cause of its want of success when employed—the same is the case with respect to almost all methods of treatment in any disease whatever, in affording relief to which, as in most other things, “*Qui cito dat bis dat.*”

A few cases by way of example: Mrs. W., aged 24, married three years, no children, always had painful menstruation, and pains between periods increased by locomotion. Diagnosed ante-flexed uterus with congested os. Used graduated sounds for two months, and a cradle pessary for three months: Patient felt relief from the first, and became pregnant while wearing the pes-

sary. In due time she was delivered of a fine male child, has enjoyed excellent health since, and is now reaching the end of her second pregnancy.

Miss F., applied a year before her marriage for relief of her dysmenorrhœa, and constant bearing down pains, referable to the uterus. In this case marked constitutional symptoms were present, anemia, want of appetite and constipation. The cervical canal was very small and the uterus anteflexed. Same treatment as in last case, in conjunction with tonics, continued for six months, when she considered herself cured. Married six months later and had a fine boy.

Miss B., æt. 27, has had dysmenorrhœa for years, telling much on her general health. Treatment by graduated sounds and cradle pessary for three months. Relief almost immediate. Gained 14 lbs, weight in three months, and left, rejoicing.

Gentlemen, many such cases might be adduced with slight variations, but you will say, "what of those patients who do not progress favorably—whose case are either more severe to commence with, or less amenable to treatment?"

First of all we have the various *dilators* hitherto in use, which might be tried. There is Dr. Priestley's instrument, and those of Marion Sims, Mott, and many others, but it is doubtful if they present any real advantage over the series of graduated sounds. Their action is only limited, and if there is much induration of the tissues, they cannot be relied upon.

Sponge tents or *tents* of *Sea Tangle*, are much more reliable, but apart from their unpleasantness, and sometimes disagreeable effects, it will be found, that in cases of contraction that resist the treatment by the graduated sounds, their effect is not permanent.

Intra-uterine stem pessaries are more valuable, if retained without producing irritation, than either of the above means, *I believe*, but often cannot be worn by those who are employed in active avocations.

Dr. Schræder, in Ziemssen's *Encyclopædia of Medicine*, advocates the use of intra-uterine stems, with a vaginal bulb, both as repositors and permanent pessaries, for retaining the uterus in the proper position. This is done by packing the vagina with pellets

of cotton, so placed against the vaginal bulb as to give the desired direction to the stem.

Dr. Schröder's directions for introducing the stem contain a hint that will be often available—after introducing the stem as far as it goes without difficulty, (which is generally to the os internum,) he then, by pressing the cervix, by means of the bulb, backwards or forwards, makes it become straight, or in a line with the cavity of the anteflexed or retroflexed corpus—the stem then runs in with ease, and without bruising the uterine walls. By this manœuvre, the anteflexion or retroflexion has been converted into a *version* of the same kind, and this is reduced by pushing the bulb *backwards* or *forwards* ; when it can be retained in position by cotton in the vagina as before stated.

These means failing, we might insist on rest in bed, in a proper position, in conjunction with the intra-uterine stem pessary, but it is *that* very circumstance which disgusts a patient, who hardly feels sick enough to be confined *thus*, especially, when nothing very active is being done for her relief.

It is in such cases that an *operation* is demanded, and this brings us to the last subject of our essay.

What operations can we perform in such a case, if requested to do so by our patient ?

I will mention the operation of Koberle of Strasbourg, only because I am certain few of us will be tempted to repeat it. In a case of retroflexion he performed gastrotomy, and fixed the uterus to the abdominal wall by means of the broad ligament which he fastened to the outside wound. He cured the retroflexion, without killing the patient, which was a remarkable performance.

We have Marion Sims' operation for obstinate anteflexion, by slitting the posterior wall of the cervix, which I have performed once with a result satisfactory to my patient. This is, of course, applicable to nothing else than anteflexion, and is a formidable proceeding, as much hemorrhagæ is apt to occur.

We have also the *bi-lateral incision*, which has been, hitherto, the *dernier ressort* in these cases.

Whether performed according to the original plan of Sir J. Y.

Simpson, or according to the methods of Sims, Greenhalgh, Barnes or Coghlan, this operation essentially consists in incising both sides of the cervix, from the internal to the external os, and plugging the wound to prevent reunion of the cut edges.

All authorities on the subject allow that the operation is not without risks to life, and that the opening thus produced, invariably contracts after a certain time, and is apt to become almost as small as before. In fact, Hewitt proposes to use this operation in certain cases, as a first step towards subsequent treatment by intra-uterine stems, &c. Even Sims, who is a warm advocate, allows both the objections I have stated.

With a view of furnishing a *prompt* and *decisive* means of treating cases of contracted or flexed cervix, which would be free from these objections, Dr. Ball, of Brooklyn, proposes to dilate the cervix *forcibly* and *rapidly* by means of a proper instrument, worked by a screw, and then to insert a large intra-uterine pessary, which is to be retained *in situ* until the uterus heals over it to the desired size, and in the requisite position.

Here is an instrument for the operation, and suitable intra-uterine pessaries which I had made a short time ago for a patient who desired me to operate. It has been used twice; once by myself, and once by our esteemed Vice-President, Dr. Featherstonhaugh.

Dr. Ball claims for his operation, the following advantages over the bi-lateral incision :

1. It is safer.*
2. It remedies *flexion* as well as *contraction* of the cervical canal, by causing an altered action in the nutrition of the cervix, and a certain amount of inflammation, which gives the uterus the needful stiffness, while by means of the stem it is made to heal in the desired position, which it retains.
3. The increase in size of the canal is not subject to be lost by cicatrization and consequent contraction.
4. It obviates the presence of a *cicatrix*, which is an objection

* In his pamphlet Dr. Ball says no bad symptoms have followed its employment. However, in a letter I received from the doctor within the last few days, though he reports many successful cases, yet he mentions, also, one that proved fatal by peritonitis, brought on, the doctor believes, by the imprudences committed by the patient.

during parturition, and it does not endanger the life of the fœtus by miscarriage from destruction of the structure of the cervix, the natural guardian of pregnancy.

The manner of performing the operation will be fully described in the report of the two following cases.

Miss A. N., 24 years of age, began to menstruate early, and had much pain from the commencement, which diminished somewhat as she became more developed, until she entered a knitting mill, where she had for several years, to stand from six A. M. to six P. M., with the exception of three-quarters of an hour for dinner. For the last few years her work has been sitting, bent forward. Most of the work had to be accomplished with the left hand, with which arm all the lifting had to be done.

During the last two years her symptoms have much increased in severity.

A few hours after the flow had appeared in trifling proportions, the pains commenced. They began in the back, coming round the hips to the hypogastric region, and were of a pressing down or expulsive nature. The patient compares them to forcibly pressing the blood down into a sore finger. The result of these pains would be a more free discharge, after which a little ease was felt, for a short period, followed by the same pain, resulting in the same consequences.

After the first day the pain would diminish, until the third, when the same train of symptoms would return, with the difference that the uterus felt "*sore*," and the pains would not intermit or remit as completely as on the first day.

The patient had been troubled for about three years with vesical tenesmus, which was increased at the menstrual period, and, for about the same extent of time, has had much sympathetic pain in the epigastrium, often severe enough to make her quit work and take to bed. She also had the characteristic pain in the left inguinal region which was never felt on the opposite side. Her appetite was capricious and often absent, and she lost strength and was subject to sick headache of a neuralgic character, and to deranged stomach.

In May last, the patient came under treatment. Guided to the

true nature of the case by the pain in the left inguinal region, I made an examination, and found the uterus presented a typical case of *antero lateral flexion* and *version*; it being bent on itself quite acutely, and the fundus laying forwards in the left inguinal region, where it could be distinctly pinched, so to speak, between the finger in the vagina and the hand on the abdomen. The os gave the impression of being inserted into the left side of the vagina, instead of its median line, and a sound to be introduced had to be directed towards that side.

A Sims' silver probe, representing a No. 4 catheter, bent almost to a right angle, and introduced with the concavity to the left side, was all that could be made to pass the os internum, and that with great difficulty. The uterus itself was very small, almost infantile in size, and a sound which completely reached the fundus entered barely one inch and six-eighths.

There was therefore a small uterus with a narrow canal and *flexion* and *version antero laterally*.

The treatment adopted consisted of dilatation with the graduated metallic sounds, and reposition by their means, as before described, and the insertion into the vagina of a block tin pessary, of which one arm projected upwards considerably more than the other.

The patient improved sensibly and her menstrual periods were much less severe, especially if she were careful to have the dilatation practised regularly twice a week; but she neglected to do so and found her old troubles returned.

Having asked me if some more permanent relief could be obtained, I showed her one of Dr. Ball's pamphlets, and told her to take it home to her mother.

I represented the operation to her, gentlemen, as I do to you, for what it is worth; telling her I knew nothing whatever about it, but what was in that pamphlet; and that while I was willing to try it, in her case, if she desired, I must leave the entire matter to her own judgment.

The result was she decided on having the operation performed. I accordingly had the instrument you see and suitable intra-uterine pessaries made by Tiemann.

Dr. Ball advises to bring the patient into a state of profound anesthesia, and then to open the os uteri to a sufficient amount to introduced the dilator, by first using the largest metal bougie that will enter with ease, and following with larger ones in rapid succession until the desired size is attained. In this case, my patient having a mitral systolic murmur, I wished to employ as little of the anæsthetic as possible, and the uterus being very tolerant of manipulation, I introduced graduated sounds every day for a week and succeeded on the eve of the operation in placing the dilator *in situ*.

The patient having taken a purgative the day before, I operated on January 12th, assisted by Drs. Dunlap and Featherstonhaugh.

To abridge the period of anesthesia before administering the ether, the patient was placed in position on her back, the hips well out over the edge of the bed, and her feet resting on chairs; a three bladed self-retaining speculum was then introduced, the os uteri transfixed by a tenaculum and pulled down and the dilator placed in position.

Ether was now administered, and as soon as the patient was under its effects the screw was turned. The dilator had been opened to the size of half an inch, when to the great disappointment of all concerned, the central rivet or pivot broke, and the operation had to be left incomplete.

The patient not at all discouraged by this failure said she would try it again, but as her menstrual period would soon occur, it was deemed prudent to await its completion.

She commenced menstruating within seven days, and the period was less painful than usual, but only to a trifling degree.

The patient was kept most of the time in bed, and had no other trouble than a little of her usual vesical tenesmus; however this confinement, and the delays that took place, somewhat diminished her general good condition.

January 28th having been appointed as the day, she insisted upon the operation being performed in spite of her having a sick headache.

Having found she could stand ether well, she was put com-

pletely under its influence, and assisted by Drs. Dunlap, Featherstonhaugh and Witbeck, I proceeded as before. The uterine canal was dilated in all directions to about the three-seventh of an inch, but not as much as I would have desired. It was very difficult to distend, and our rivet again broke before I was fully satisfied. I cannot help, in this place, criticising manufacturers of so much experience, for putting so small a rivet in a position in which it has to bear the whole distending force. However, we could introduce this pessary which was done.

It was kept in place by tapes passed through this ring and secured by adhesive plaster on the back and abdomen—they were made quite tight. The patient was then put to bed, given ice to control vomiting that was present, and later a dose of morphia.

The constitutional disturbance that followed this operation was more than after the first, there being quick pulse, furred tongue, and pyrexia, but it all subsided in two or three days.

I now discovered that the pessary being put on a screw, and not fixed firmly on a rod, as should have been done, it allowed the uterus to fall towards the left side. To remedy this cost me considerable trouble, as the gutta percha part of the pessary was wholly within the vagina, but I finally succeeded.

I mention these apparently trifling incidents that any who may desire to try the operation, may profit by my annoyances, and take care that all the appliances are perfect before commencing the operation. Another little practical point is this—the tenaculum should be passed from within the os uteri outwards, through its wall, its point does not then interfere with the action of the dilator. It is important likewise to firmly transfix the wall of the cervix, otherwise the tenaculum will tear out, causing an ugly laceration.

The patient did well, and I intended to remove the pessary at the end of the week, but menstruation having commenced, I thought I had better leave it in till that process was terminated in order to let those changes which occur during the period take place while it was *in situ*.

The most gratifying result was that menstruation took place almost without pain, and what trifling discomfort there was present,

was of the same character as that she had the days before, and attributed to the presence of the pessary in the uterus.

I look upon this circumstance as satisfactory, no matter what may be the final result of the operation, for it proves to my mind that the pain was due to mechanical obstruction to the free discharge of the menstrual blood, for here was the uterus, yet in an inflamed, or at least irritated condition, that could not be touched without causing pain, and which, nevertheless, was menstruating without suffering, while the same organ, when it had not a particle of inflammation or irritation, when it could be handled, probed and dilated without causing even passing irritation, could not then perform its monthly function without causing intense distress.

I removed the pessary two days after menstruation ceased, without producing pain, and two days later the patient began to sit up. As a precaution, I introduced her pessary, for the vagina had been considerably stretched by the upward pressure of the strings on the pessary inserted into the uterus.

My patient was a little *run down* by her prolonged confinement in bed, but apart from a few nervous symptoms, she has progressed well, and is now able to take a long walk, and gains strength from day to day. A few days ago, for the sake of information, I passed a No. 10 sound, which glided in of its own weight as it would into a capacious male urethra, and without producing any but trifling distress.

The following are the notes taken on his case by Dr. Featherstonbaugh, and kindly put at my disposal for this occasion.

The doctor commenced treating Mrs. B., on January 1st. She was suffering from profuse diarrhea, having five to fifteen passages a day. She had been afflicted with this complaint for five or six years, accompanied with constant pain in the back, rectum and inferior extremities. Had vomited almost every day for two or three years, and was unable for two or three weeks in every month to walk but short distances. Menstruation was very painful, and leucorrhœa existed. For about a week the patient was treated with Tannate of Bismuth and Morphia, without modifying the symptoms.

January 10th.—*Examination*.—Large œdematous cervix—granular erosions, and easily bleeding surface. Tannin, Glycerine, Tincture of opium and extract of Balsam of Pinus Canadensis, were applied locally to January 15th, on which day dilatation of the cervix by sponge tents was commenced.

January 18th.—Having examined with a sound, an acute retroflexion was discovered, applied a retroflexion pessary.

Used several pessaries up to January 30th with about the same result, which was *nil*.

February 2d.—Dilated under chloroform with instrument according to the method of Dr. Ball, and introduced this large hollow stem pessary, which was retained in the uterus by tapes as prescribed in last case.

No constitutional symptoms whatever followed the operation.

February 4th.—Constipation.

February 10th.—Menstruating through the hollow pessary without pain—has not vomited since the operation.

February 13th.—Menses ceased.

February 17th.—Withdrew pessary—condition of patient good.

February 20th.—Sound No. 16 passes into the uterus and shows its position to be normal.

March 6th.—Simpson's sound passes easily into the uterus, with the usual curvature. Patient says she menstruated without pain on March 3d, and is still menstruating. Has one or two normal passages a day, does not vomit, and expresses herself as very well.

CONCLUSION.

In conclusion let me add, that in his pamphlet Dr. Ball mentions that a somewhat similar idea has been enunciated by Dr. J. Protheroe Smith, of London, whose method, however, was much less complete, and extended over much time, and who did not use a pessary. After writing his paper, Dr. Ball's attention was called to an article translated from the German, of Dr. Ellinger, of Stuttgart, and published in the New York Medical Journal, containing a variety of experience similar to his own, with the exception of the use of the pessary. Dr. Ellinger's method is mentioned in Ziemssen's Encyclopædia.

Dr. Ellinger employs, for rapid dilatation, a sort of modified polypus forceps, which are introduced into the narrowest cervix without preliminary dilatation. In case any part of the canal offers any resistance to the progress of the instrument, by separating the arms of the instrument for a few moments, the stricture above is found to yield, so that in this way a cervix which offers great difficulties to the introduction of the sound, allows the dilatorium to pass with facility. The pain is said to be no greater than that induced by the introduction of the ordinary Simpson sound. In general, dilatation was performed upon office patients who were allowed to go about their business.

Dr. Ellinger recommends extemporized dilatation :

1. In stricture of the cervical canal.
2. In Stenosis due to flexions.
3. Metrorrhagia in a flabby, swollen uterus, but without new growths.
4. Retained catarrhal secretions.
5. For exploration of uterine cavity.
6. Replacement of a flexed uterus.
7. Sterility.

Finally, Dr. Ellinger declares that he has *never* had reason to regret the rapid dilatation, and urges it where dilatation is justifiable at all, to the exclusion of all other methods.

With respect to *counterindications* to the operation, Dr. Ball says he would recommend it where any other surgical or mechanical means would be considered advisable.

He would not interfere, however, in any case where there was acute inflammation of any part of the organ, yet, in the body of his pamphlet Dr. Ball says : "I have operated upon patients who had suffered for years from chronic eudo-cervicitis, and when the most gentle touch of the finger would cause excessive pain, when, in a few days the sensibility would all be gone, sometimes even before the pessary was removed."

Should this dilator prove to possess advantages over those hitherto introduced, I propose to have a slighter one made with the natural curve of the uterine canal, to use in the office, for patients

who prefer their treatment to extend over a longer period, than to be put to the trouble and confinement incident to an operation.

I also think that the edges might with advantage be made more rounded, like those of an ordinary sound.

Whether this operation will merit the claims put forth by its originator remains for the future to demonstrate.

In the two cases in which it has been employed in Cohoes, the result is, so far, favorable, but it is only the combined experience, derived from many operations, that can decide whether it is destined, like so many other innovations, to sink into oblivion, or to be maintained as a real step forward in gynecology, a department of our science, which born of this century, has, notwithstanding its youth, been second to none in the rapidity of its march towards excellence, and which has done *so much* to alleviate the suffering of that interesting portion of our species to which we all owe so much, both as men and physicians.

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ART. II.—*Abstract of the Proceedings of the Buffalo Medical Association, May 25, 1876.* Dr. E. N. Brush, Secretary.

Dr. Wyckoff, President, in the chair.

Present, Drs. White, Rochester, Folwell, Little, Brecht, Bielby, Fowler, Gould, Miner, Briggs, Howe, Samo, Hopkins, Macneil, W. W. Miner, Gay, Greene, Cronyn, O'Brien, Bartlett, Hauenstien, Mynter and Trowbridge, Dr. Baker, by invitation.

The minutes of the last meeting were read and approved.

The regular essayist, DR. COXE, being absent on account of illness, DR. ROCHESTER moved that he be given further time. Carried.

The Secretary read a communication from the Boston Society of Civil Engineers in reference to a uniform system of weights and measures. DR. HOPKINS moved that it be placed on file. Carried.

DR. FOLWELL read a detailed report of a fatal case of osteo-myelitis of the femur.

DR. ROCHESTER said that the case reported by Dr. Folwell recalled to his mind the discussion held in this Society in reference

to the relation of Potts' Disease of the Spine and tuberculosis. At that time the general opinion was that Potts' disease was generally the result of accident, that it was not due to constitutional trouble, and was seldom alone fatal. He reported briefly a fatal case of the disease which recently came under his observation.

DR. CRONYN said that Dr. Folwell's case was worthy of consideration for another reason than that advanced, that is, that the constitution of the patient was of such a low condition that none of the means adopted were such as to work a cure. The lesson to be learned was that the favorable results were more often due to the good constitution of the patient than to the means employed.

DR. WHITE reported the particulars of a case where the bones of a fœtus had been discharged from the bladder.

DR. ROCHESTER moved that Dr. Mynter's paper, (see May No., page 377,) be taken from the table. Carried.

DR. ROCHESTER referred to the writings of Dr. Bowditch, and said Dr. Bowditch operates for the following reasons: .

1. To save life when threatened.
2. To prolong life even when complicated with severe disease.
3. To shorten latent pleurisy.
4. To give temporary relief merely, in absolutely helpless cases.
5. To relieve cases of common pleurisy which do not easily yield to remedies after a few weeks treatment.

DR. ROCHESTER said that he believed the plan of Dr. Bowditch was one which it was eminently safe to follow. His personal experience had been somewhat extended, having operated on over twenty cases, in one of which he found it necessary to repeat the operation twelve times. In none of these cases had he operated until all other appropriate means had been carefully tested. Dr. Mynter proposes to operate as soon as the diagnosis is made out, the idea being to prevent compression of the lung, dyspnoea, etc. As he understood Dr. Mynter, he would operate at any time as soon as fluid is present; if this shall prove to be good and successful practice he would give his adherence to it, but it seems doubtful. We cannot say of a patient, on the fourth or fifth day of acute pleuritis, that the fluid will not be absorbed in a short time, under appropriate remedies, without dangerous or even troublesome

compression of the lung. He did not believe that Dr. Bowditch would advise any one to operate as early as the fifth to the tenth day when but a small amount of fluid was present and no dyspnœa. He did not desire to stand in the way of progress, but care must be taken that what we call progress or improvement is not trifling with human life. To open the pleural cavity to remove a simple serous effusion, when other means had not been faithfully tried, seemed somewhat analagous to converting a simple fracture into a compound one. There were occasions when the fluid accumulated so rapidly as to seriously interfere with breathing, when it would be necessary to employ radical measures to get rid of the effusion, but in a case where there were no symptoms other than those of acute pleuritis, with but little fluid, he did not think there was any warrant for opening into the pleural cavity. Every member of the Association knows that these effusions disappeared frequently under simple treatment, and hence the operation was one which should not be made until other means had been tried.

DR. MYNTER said that the only two patients he had operated on recovered. The first patient was operated on on the sixth day, recovered in sixteen days with no remaining evidence of pleuritis. The second patient was operated on on the twentieth day, three and one-half quarts of fluid being removed. Recovery was perfect on the fourteenth day after. In this case there is present a slight dullness in the lower part of the scapular region. The operation was not one which he had himself advanced, in the hospitals in Denmark it is frequently made, and has been cultivated to a considerable extent. For the last ten years he was connected with a large hospital in Copenhagen as resident physician, and saw at least twenty-five cases operated on with perfect success. He did not see that that there was any danger in the operation with a capillary trocar and a clean apparatus.

DR. J. F. MINER said that Dr. Mynter's expression in reference to "cultivating an operation" afforded a text for some remarks as to the danger of *operating* always and indiscriminately on all cases. Surgeons should be very careful in exposing their patients to the risks of an operation when recovery was likely to follow other and less radical methods of treatment. The idea of making an opera-

tion in a disease which was, in a large majority of cases, amenable to treatment, should be discountenanced. No operation, however slight, is free from danger, and the careful surgeon should weigh well all other means of treatment before resorting to one. Statistics would have to show that a larger proportion recovered under the mode of treatment under discussion than under others before it could receive professional endorsement.

DR. GAY said that if the means of physical exploration had reached such a point that we can determine to a certainty whether a pint or three pints of fluid was in the pleural cavity, and the patient had difficulty in breathing, and his heart is displaced by the pressure, thoracentesis should be performed. He did not think that any doubt should exist as to the propriety of the operation. If we could return to the practice of twenty-five or thirty years ago and bleed, we should probably have less pleuritic effusion.

After some further discussion of the subject of thoracentesis, which, however, had more reference to empyema and chronic pleuritis, the Association adjourned.

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MISCELLANEOUS.

International Medical Congress.

The International Medical Congress will be formally opened at noon on Monday the fourth day of September. The sessions of the congress and of its sections will be held in the University of Pennsylvania, Locust and Thirty-fourth streets. The general meetings will be held daily, from ten to one o'clock. The sections will meet at two o'clock. Luncheon for Members of the Congress will be served daily in the University building from one to two o'clock.

On Wednesday evening, September 6th, Dr. J. J. Woodward, U. S. A., will address the Congress on the Scientific Work of the Surgeon-General's Bureau.

The public dinner of the Congress will be given on Thursday evening, September 7th, at seven o'clock.

The registration book will be open daily from Thursday, August 31st, to Saturday, September 2d, inclusive, from twelve to three P. M., in the hall of the College of Physicians, northeast corner of

Thirteenth and Locust streets, and at the University of Pennsylvania on Monday, September 4th, from nine to twelve M., and daily thereafter from nine to ten A. M. Credentials must in every case be presented.

Letters addressed to the Members of the Congress, to the care of the College of Physicians, northeast corner of Locust and Thirteenth streets, Philadelphia, during the week of meeting will be delivered at the University of Pennsylvania.

The secretaries of State and Territorial medical societies are requested to forward without delay, to the chairman of the Committee on Credentials, I. Minis Hays, M. D., 1607 Locust Street Philadelphia, lists of their duly accredited delegates to the Congress. Delegates and visitors intending to attend the Congress are earnestly requested individually to notify immediately the same committee. This information is desired to facilitate registration, and to insure proper accommodation for the Congress.

Members intending to participate in the public (subscription) dinner of the Congress will please notify the secretary of the Committee on Entertainment, J. Ewing Mears, M. D., 1429 Walnut Street, Philadelphia.

Gentlemen intending to make communications upon scientific subjects, or to participate in any of the debates, will please notify the commission before the 15th of August.

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Editorial.

With our next number we commence the sixteenth volume of the new series of THE BUFFALO MEDICAL AND SURGICAL JOURNAL. The JOURNAL has now passed through thirty years of publication since its first issue in 1845, by Prof. Austin Flint, M. D. During that time it has given to its readers some of the most important and valuable facts which have been added to professional knowledge. It was our intention to lay before our readers a brief resumé of some of the more important contributions to medical science which have enriched its pages, and have become in this way the property of the whole world, but we find the task too extensive, we can only mention a few. In these pages Dr. Flint published the first series of cases demonstrating that Typhoid Fever was diffused by impure drinking-water, here were commenced those articles upon the treatment of Fractures and Dislocations by Dr. Hamilton, which have since made his name famous and have grown into a Treatise which is classical. Dalton and Flint, Jr., made in the BUFFALO MEDICAL JOURNAL, a commencement to those contributions

to Physiological science which they have since so gloriously continued. The fact that the uterus could be successfully restored to its normal position after years of inversion was here triumphantly demonstrated by Prof. White in a series of cases which have no rival the world over. The method of removing Ovarian Tumors by Enucleation was first explained through our pages, and has since become a recognized operation by all gynecological surgeons. Time and space will not permit us to indulge in a retrospect such as we would desire, nor is it necessary, the work of the JOURNAL is before its readers, and will speak for itself. We will be pardoned however, if we quote the words of Dr. Sanford B. Hunt, Editor of the *Newark Daily Advertiser*, in a recent address. "The noblest, most patient, most lasting and effective books in American Literature, appeared as serials in THE BUFFALO MEDICAL JOURNAL, or were filled up and rounded afterwards, from that source."

In the coming volume we hope to place before our readers a series of original communications, which shall equal any which have been published since the commencement of the Journal. Care and discretion will also be exercised in the selection of material for the miscellaneous department, to present that only which shall be of practical value. Our large number of readers, widely scattered as they are, must daily observe cases which are of interest and value, we invite them to freely make use of our pages to communicate their ideas. It is by the mental interchange of thought in this manner that knowledge in our profession is destined to grow, and every man should remember the debt he owes to his profession and make frequent payments.

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American Dermatological Association.

We have received the following to which we take pleasure in giving publicity.

DEAR SIR:—At an informal meeting of the undersigned, held in Philadelphia, at the rooms of the Section of Practical Medicine, of the American Medical Association, Wednesday June 7th, 1876, after the election of a Chairman and Secretary, pro-tem: it was

Resolved To call upon such American Physicians as had evinced a special interest in Dermatology to unite in forming an American Dermatological Association. *Resolved*, That the meeting for organization be held in the University of Pennsylvania, on Wednesday September 6th, 1876, at 6 P. M., or immediately after the close of the meeting of the Section of Dermatology and Syphilology, of the International Medical Congress, on that day.

It is sincerely desired that you will be present and aid in the organization.

Please signify your pleasure to the Secretary at the earliest opportunity,
and oblige,

Very Truly Yours,

L. D. BULKLEY, Secretary, pro tem,
1 East 33d St., New York.

EDWARD WIGGLESWORTH Jr., Chairman,
Boston, Mass.

LOUIS A. DUHRING, Philadelphia, Pa.

LUNSFORD P. YANDELL, Louisville, Ky.

GEORGE HENRY FOX, New York.

J. E. ATKINSON, Baltimore, Md.

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Books Reviewed.

Fifth Diseases and their Prevention. By John Simon, M. D., F. R. C. S. Reprinted under the direction of the State Board of Health of Massachusetts. Boston: James Campbell, 1876.

This little work appeared first as the preface to a volume of reports made by Government Inspectors upon several epidemics which had occurred in various parts of England. It is so admirably suited to general perusal that the Massachusetts State Board of Health, through a committee, present it to the American public and urge its careful perusal. On page six the estimate is made that of the half million deaths which are yearly registered in England, fully one hundred and twenty-five thousand could be prevented if the existing knowledge of the chief causes of disease as affecting masses of the population were more reasonably well applied. The essay shows that local, and in most instances, preventable causes, have much to do with the death rate of various portions of England. For instance, in certain districts the death-rate of infants in the first year of life ranges from eight to twelve per cent. while in a still larger proportion of districts it ranges from nineteen to thirty per cent. Taking the death-rate of all ages it is found to be in England twenty-two and one-half per thousand per annum, which includes local rates ranging on the one hand from thirteen to seventeen, and on the other far above thirty per thousand.

In a large proportion of these enormous variations in the death-rate, filth in one form or another is directly chargeable with the production of disease, and it is with the view of enlightening the public upon the subject that this admirable essay has been issued by the State Board of Health of Massachu-

setts. Its careful study is properly urged upon all, that they may form a more intelligent estimate of the value of hygiene as a conservator of public health. In this connection we make the following very pertinent extracts from the *Medical Record* on the "Hygiene of Ruralizing:"

"At this time of the year, when half the population of our cities are ruralizing, a great many questions concerning the strictly sanitary advantages of the practice present themselves for consideration. The physician, when he advises his patients to go to the country, does not as often as he might appreciate the responsibility which he assumes. There are so many qualifying conditions to be taken into account in the choice of a locality; that it is not surprising that many mistakes are made; that patients, instead of improving, get worse; indeed, that the very change which was thought to be beneficial had a direct influence in hastening their dissolution. Some of the disastrous effects of this advice cannot be very well avoided in the absence of exact knowledge concerning the effects of climate on disease; but there are other drawbacks which are preventable and remediable, and to which, as medical men, we should give our attention.

"We are of the opinion that there is not enough care taken to guard against the causes of disease which are now so generally recognized as associated with the unsanitary rural retreats. The time has gone by when the mountain side, the river shore, or the ocean beach is a synonym of health, and that a hap-hazard guess at the salubrity of the localities is always attended with good results. It has become the habit, however, with some medical men to consult the conveniences of their patients as regards localities, rather than rely upon a positive knowledge of the claims of the said locality as a health resort.

"We have had within the past few years numerous examples of sickness in some of our most fashionable summer hotels, due to the neglect of the most ordinary sanitary regulations. When we consider this possibility in connection with large and expensive hotels, supplied 'with all the modern conveniences,' how much more will such a possibility of danger be exaggerated in the numerous farm-houses tinkered into the appearance of comfort and health, and overcrowded in the hottest time of the year by temporary boarders. The practitioners in rural districts have readily offered their testimony against these abominations, or so-called country boarding-houses; and numerous cases of preventable diseases occurring in them have come to our notice, due not only to overcrowding, but to culpable neglect of drainage, foul drinking-water, and other disease-engendering influences. So common is this condition of things, that it is becoming the exception rather than the rule to find these farm-houses even decently supplied with sanitary conveniences. When we add to this the risk of contamination of drinking-water, the frequent possibility of which has of late been so painfully impressed upon us, we become aware of the fact that a country retreat, far from being a health resort, may be the positive source of diseases which do not exist in the cities.

"We have repeatedly alluded to the dangerous condition of some of the religious camping-grounds, so largely occupied during the warmer months. Although much has been done to prevent disease, much more is required before we can be assured that the longer these grounds are occupied the more dangerously saturated will the soil become. It was only a short time ago that provisions were made to guard against the sewage saturation of one of the largest of these camping-grounds. Until then, drinking-water was obtained by the sinking of pipes in a sandy beach, while holes in the sand were the only receptacles of the excrement. It is impossible to estimate how many cases of disease and death have been prevented by these means, the timely adoption of which seems almost providential. But many of these pilgrim picnic grounds are not in such a desirable condition, and the breaking out of

camp fever, diarrhœal and other diseases, seems to be the merest question of time. The same remark applies with equal force and in a proportionate degree to many of the farm-houses, whose drains are badly cared for, and whose crowded condition intensify the risks of speedy soil contamination.

A Treatise on Diseases of the Nervous System. By Wm. A. Hammond, M. D. Sixth Edition, re-written, enlarged and improved. New York: D. Appleton & Co., 1876. Buffalo: Martin Taylor.

This work has been almost wholly re-written since the appearance of the last edition, and much additional matter has been incorporated within its pages. In its present condition the work of Dr. Hammond, seems as complete as any with which we are acquainted, the description of the various forms of nervous disorders is, in the main, excellent, and the treatment advised by the author judicious; his readers must not however be disappointed if the results which they obtain are not what the text would lead them to anticipate.

While we can commend the labor of the author in so thoroughly revising and adding to the text of his truly valuable work, we can not say as much in praise of the judgement exercised in the selection of the illustrations for certain portions of the work; those on pages 769-770-771 for instance, have too much of a sensational appearance, and while doubtless true representations are not necessary to simplify the text.

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Books and Pamphlets Received.

Atlas of Skin Diseases. By Louis A. Duhring, M. D., etc. Part I. Eczema, Psoriasis, Lupus Erythematosus, and Syphiolderma. Philadelphia: J. B. Lippincott & Co., 1876. Buffalo: Theo. Butler & Son.

A Practical Treatise on Materia Medica and Therapeutics. By Robert Bartholow, M. A., M. D. New York: D. Appleton & Co., 1876. Buffalo: Herger & Ulbrich.

Inhalation in the Treatment of Disease, its Therapeutics and Practice. A Treatise on the Inhalation of Gases, Vapors, Fumes Compressed and Rarefied Air, Nebulized Fluids and Powders. By J. Solis Cohen, M. D. Philadelphia: Lindsay & Blakiston, 1876. Buffalo: Theo. Butler & Son.

The Students Guide to Dental Anatomy and Surgery. By Henry Sewill. Philadelphia: Lindsay & Blakiston, 1876. Buffalo: Theo. Butler & Son.

The Student's Guide to the Practice of Midwifery. By Lloyd D. Roberts, M. D. Philadelphia: Lindsay & Blakiston, 1876. Buffalo: Theo. Butler & Son.

Micro-Photographs in Histology, Normal and Pathological, No. 3. By Carl Seiler, M. D., in conjunction with J. G. Hunt, M. D., and J. G. Richardson, M. D. Philadelphia: J. H. Coats & Co.

Specimen Fasciculus of the Catalogue of the National Medical Library under the Direction of the Surgeon General, United States Army, at Washington, D. C.

Messrs. Hurd & Houghton, announces a work on the Anatomy of the Head. By Thomas Dwight, M. D., they also announce the second volume of Public Health, containing the most important papers read at the American Public Health Association.

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